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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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What follows is good, though homely: "The men who prosper in this world are the men who mind their own business and keep on minding it." An exchange furnishes an example: "'Tatoes!" cried a colored peddler in Richmond. 'Hush dat racket! You distracts the whole neighborhood!' responded a colored woman from a doorway. 'You kin hear me, kin you?' 'Hear you! I kin hear you a mile.' 'T'anks; I'se hollerin' to be heard. 'Tatoes!"—*Ram's Horn.*

A contributor to a contemporary in an article upon boilers says that steam escapes from a high pressure engine at 212°. That is getting it down very low, for at 212° steam would not go out of an exhaust pipe very far. —*The Engineer, New York.*

TO PREVENT DRIFTING TO LEEWARD.

An invention which is claimed to be an improvement in the hulls of vessels designed to afford the maximum of speed and safety, while the construction is such that drifting to leeward will be in a great measure avoided, has been patented in Canada and Great Britain, as well as in this country by Rev. Patrick O'Brien, of St. Johns, Newfoundland. The bottom of the vessel is curved in convex form from the stem to the stern, and has a concave face from the keel to the sharp-edged bilge, while from the bilge to the top of the hull the sides are curved, presenting an outward convexed surface at the stern. In every case where a cross section is taken through the bilge the sides and the bottom of the hull meet at an obtuse angle, and the outward inclination of the sides preferably increases from the ends of the hull. The steering qualities of vessels built after this plan are, it is claimed, greatly improved, especially in high winds which throw the hull over upon its side, as the bilge sections then serve as a side keel to hold the vessel to her course. This improved vessel has received the indorsement of many practical captains and seamen.

THE ARK A MODEL SHIP.

Speaking of ancient ships and shipbuilding, Prof. J. Harvey Biles says that though Great Britain and America have made such great strides in shipbuilding, none of their wooden ships approach the dimensions of the Ark, which was 450 feet long, 75 feet broad and 45 feet deep. He calculates that this was the size of this vessel from the Bible measurements, taking the cubit to be 18 inches. This he thinks, was the correct measurement. The largest wooden ship afloat now does not nearly approach the size of the Ark; the vessel is the Shenandoah, and her dimensions are 299 feet by 49 feet broad and 29 feet deep. Even the Campania is much smaller than the Ark, except in length, and the dimensions of the Ark have only been exceeded in the case of the Great Eastern. In 1856 a prize was offered for the best model of a ship made by any one in the United Kingdom, and the models were on view at the Royal Institution. The prize was awarded to a model six times the beam to the length, and ten times the depth to the length, these being the same proportions as those of the Ark.

CANADIAN LUMBERMEN'S WANTS.

A deputation of lumbermen from Rat Portage district interviewed Sir Oliver Mowatt and the Cabinet at Ottawa, Ont., one day last week. The deputation consisted of Messrs. James Conmee, E. Chadwick, president of the Rat Portage Board of Trade; D. C. Cameron, manager of the Rat Portage Lumber and Milling Co., and W. Ross. They asked the Premier to open up more timber limits, stating that lumber is so scarce at present that lumbermen have hard work to keep their mills going. They also want a change in the present system of measuring lumber on certain limits sold by the Dominion before Ontario succeeded in establishing its claim to them. It is said that the system on these old limits clashes with the system on the limits opened up later. They also desire that the present restraints on fishing in the northern lakes be removed. Messrs. Hardy and Mowatt will take the matter into their serious consideration.

DESIRABLE MICHIGAN IMPROVEMENTS.

Congressman Whiting appeared before the House Committee on Rivers and Harbors last Thursday and urged the appropriation of $80,000 for Sand Beach harbor, $5,000 more for Black river and $10,000 for the mouth of Black river. In discussing the question of river and harbor improvements in that district, Mr. Whiting says that the assistant engineer, Mr. Mealy, made a preliminary examination of the river at Sebewaing and recommended the river as worthy of improvement to a limited extent, but made no estimates. Gen. Casey has estimated that the cost of plans for the work will be $600 and that amount will be appropriated in the bill for the preparation and submission of plans for the next river and harbor bill. The same course was pursued with reference to Belle river at Marine City. The work there also embraces the establishment of harbor lines. Gen. Casey has concurred in the report of Gen. Poe, stating that Pine river at St. Clair is also worthy of improvement to a limited extent. Representative Whiting is endeavoring to have an estimate furnished at once in order that this improvement may be embraced within the present bill. He also submitted to the committee the resolution of the common council of Mt. Clemens asking for the further improvement for the Clinton river, but as there are no recommendations or estimates furnished by the engineers, he asks for a preliminary survey, hoping for an appropriation in the next bill.

VALKYRIE TO REMAIN ON THIS SIDE.

Although it now seems improbable that there will be another contest for the America's cup this year, we shall certainly have some interesting races on the Atlantic coast. Mr. Maitland Kersey, a friend of Lord Dunraven, states that the latter will come over again in May and will probably arrange races with the larger American sloops. The Valkyrie has been docked and is refitting on the American plan for such a program, under the superintendance of Mr. J. Weaver-Webb, designer of the Genesta and Galatea. She will have a new mast about two feet longer than the old one and a larger rig and sail plan. Part of the yacht's old mast has been made into a new mizzenmast for the trading schooner Maggie Abbott, and the rest of it was cut up into Valkyrie mementoes in the shape of boat hooks, walking sticks and even paper weights. Capt. Nat. Herreshoff, designer of the Vigilant, was presented at Christmas by her syndicate of owners with a purse of $2,500 as his souvenir of the races.

THE SAILOR BOY'S FAREWELL.

Farewell to father—blessed hulk,
In spite of metal, spite of bulk,
His cable soon may slip;
Yet while the parting tear is moist
The flag of gratitude I'll hoist,
In duty to the ship.

Farewell to mother—first-class she
Who launched me on life's stormy sea,
And rigged me fore and aft;
May Providence her timbers spare,
And keep her hulk in good repair
To tow the smaller craft.

Farewell to sister—lovely yacht,
But whether she'll be manned or not,
I cannot now forsee;
May some good ship a tender prove,
Well found in store of truth and love
And take her under lee.

Farewell to George—the jolly boat,
And all the little craft afloat
In home's delightful bay;
When they arrive at sailing age
May wisdom prove the weather guage,
And guide them on their way.

Farewell to all on life's rude main,
And though we ne'er may meet again,
Through stress of stormy weather;
Yet, summoned by the Board above,
We'll harbor in the port of love,
And all be moored together.—*The Lifeboat.*

NEWS AROUND THE LAKES.

CHICAGO, ILL.

Special Correspondence to The Marine Record:

Capt. James Davidson, of Bay City, was in this city Monday.

Capt. Edward Kelley, of Cleveland, is spending a few days in Chicago.

Finn Bros. chartered the steamer C. S. Parnell for corn to Buffalo at 2½ cents.

Capt. Charles Peterson has been appointed master of the schooner Mediator, for the coming season.

Cook, Calbick & Co. chartered the steamer Monohansett and consort Aberdeen for corn to Ogdensburg at 4½ cents.

The steamer Tom Adams arrived here light from Milwaukee on Sunday afternoon and went into winter quarters.

The steamer Parks Foster was towed to South Chicago last Thursday to load grain by the tugs, Tom Brown and D. T. Helm.

The schooner Emma C. Hutchinson was towed to the Armour Elevator to load Monday by the tugs Tom Brown and T. D. Helm.

C. W. Elphicke & Co. chartered the whaleback barge Sagamore for 122,000 bushels of corn to Buffalo, at 2½c. and the steamer Stafford and consort Francomb for corn to Ogdenburg at 4⅛c.

Capt. John Prindville chartered the steamer Lansing Saturday, for corn to Buffalo at 2½c. and the steamer D. M. Wilson and barge Manitowoc for wheat to Buffalo at 2¾c.

The V. O. T. tugs Protection and Van Schaick towed the barge Michigan on Monday to the Rock Island elevator to load, and the steamer Lansing Tuesday to the Union elevator to load.

Cook, Calbick & Co. chartered the steamer Aztec and consort Zapotec for corn to Kingston at 3¾c., the schooner P. S. March for corn to Port Huron at 2¼c., and the schooner Baltic to Kingston at 3¾c.

The steamer Fayette Brown, Capt. D. Girardin, which arrived here December 9th, will commence unloading at Boyle's coal dock this week. She will be unloaded by Boyle's new style steam coal shovels, which are expected to make very quick work unloading.

The Steamboat Line Agents, Vessel Agents and elevator men are about to sent a committee to Washington to call on the committee on Rivers and Harbors, to request them to get an appropriation of $700,000 from the United States government, to be expended in dredging Chicago River be a depth of 16½ feet.

The L. M. & L. S. Transportation Co.'s steamer Peerless is being given new decks by J. B. Bates & Co. She will also receive two new smoke stacks. The company's steamer City of Duluth will also receive a new smoke stack. Their steamer Jay Gould is receiving considerable repairs.

J. J. Rardon chartered the steamer George Presley for wheat to Buffalo at 2¾ cents, the schooners Olive Jeanette and Nellie Reddington for corn to Buffalo at 2½ cents, the schooners Paisley and Dundee for wheat or corn to Buffalo. The latter two will go to South Chicago to load.

Soon after the steamer Monohansett completed loading Friday afternoon it was discovered that she was making considerable water, through the bilge pump pipe which had been carelessly left open. The tug T. D. Helm was sent for to siphon out the water, which had arisen to about 28 inches when she arrived. None of the cargo is damaged.

The I. T. Line tugs towed the whaleback barge Sagamore to the Illinois Central elevator last week to load and removed her Tuesday to the Vermont Central dock to lay up. They towed the schooner Aberdeen Tuesday to the Indiana elevator to load; also the steamer Stafford and consort Francomb to the Illinois Central to load.

The Dunham tugs towed the steamer George Presley to the Armour Elevator, Saturday to load, also the schooners Nellie Reddington and Olive Jeanette to the Santa Fe Elevator to load. They also towed the schooners Paisley and Dundee down to the mouth of the river Tuesday, intending to take them to South Chicago but were prevented by a heavy snow storm which continued all that day.

The Goodrich Transit Co's. steamers City of Ludington and Menominee are making tri-weekly trips as far as the Sturgeon Bay Canal, and find a fair quantity of freight to carry. The company's fine fleet of steamers laid up at Manitowoc are receiving all necessary repairs to put them in first class condition for next seasons work.

Thursday night the officers of the Grand Lodge of Shipmasters were entertained by C. A. Funk, treasurer, and Capt. George Tebo, of the Independent Fuel Co., at a dinner at the Chicago Athletic club. Covers were laid for fourteen. The menu and wines were of the first order. After dinner they were afforded much pleasure by the members of the Athletic association and their friends, who gave gymnastic and sparring exhibitions, and a most pleasant evening was spent. The following gentlemen sat down to dinner: Captains Alex. Clark, L. Hunt, W. A. Collier, D. M. Cochrane, J. Cochrane, W. E. Rice, C. H. Weekes, C. E. Benham, Fred Starke, G. A. Shaw, G. McCullough, E. G. Thorp, Geo. Tebo and C. A. Funk.

The delegates of the Shipmasters' Association left here for their homes on Friday and Saturday well pleased with their visit and entertainment. On Wednesday night they thoroughly enjoyed the banquet and ball at the Tremont house, which was a grand success. The grand march was led by Capt. David N. Cochrane and his wife, in whose wake followed about 250 couples, comprising lovely and elegantly dressed ladies escorted by their husbands and sweethearts. The banquet, to which over 600 persons sat down, was first-class. All present pronounced it the best banquet and ball the Shipmasters had ever given and hoped to be present on many more such festive occasions. In addition to a big crowd of shipmasters and their friends, the following marine firms were represented: H. Channon Company, O. S. Richardson Fuel Co., Independent Fuel Co., John Prindiville, Elphicke & Co., J. G. Keith & Co., Carr & Blair, B. H. Fleming & Co., R. E. Rispin, Cook, Calbick & Co., W. M. Egan, John Mohr & Sons, Robt. E. Hills, International Signal Co., L. Windmuller & Co., T. M. Sullivan, O. H. Schutt, D. C. Degan, Magner & Winstow, Chicago; J. E. Miller & Sons, Port Huron; the Milwaukee Dry Dock Co., J. H. Schlosser and P. J. Gray & Co., Milwaukee.

BUFFALO, N. Y.

Special Correspondence to The Marine Record.

There is considerable feeling just now over the delay of Buffalo representatives in Congress, in making a move in the interest of a better harbor here. "No work of any kind will be done on the Buffalo breakwater extension this year," said Major Ruffner of the engineer corps, a few days ago, "beyond the repairs authorized. Work on the proposed shore arm will not be begun, for money has not yet been appropriated. The damage done to the breakwater by the storm last October has never been fully investigated, and if it was, there is not money enough to make repairs. My report on the breakwater work does not include the damage done last fall, and my hands are tied by the act of Congress, passed in July, 1892, which provides that 'After the regular or formal report on any examination, survey, project, or work under way or proposed is submitted, no supplemental or additional report or estimate for the same fiscal year shall be made unless ordered by resolution of Congress.' So you see I am prohibited from estimating the cost of repairs or discussing the proposed extension of the breakwater to Stony Point or any other point." Capt. M. M. Drake and other vesselmen have denounced Congressman Lockwood, for what they go so far as to term promise breaking in the matter of introducing resolutions in the interest of Buffalo harbor. It is understood that Judge Daniels has already taken up the matter, however, and a Washington dispatch says he will argue for an appropriation to extend the breakwater to Stony Point. The first thing to do will be to call for a preliminary survey and estimate of the work.

One advocate of extension says the shore arm should never be built, and probably never will. One plan, approved by Major Ruffner, and by General Abbott, the division engineer, as well, provides that if the new breakwater shall begin at a point about five hundred feet inside the outer end of the present breakwater, and extend to a point about half a mile nearer Buffalo than Stony Point. This work would cost about $2,500,000, according to present estimates. A still larger harbor would be obtained by still another plan, that of extending the breakwater two hundred feet outside the outer end of the present structure, and running in a straight line to Stony Point. This work would cost about $3,250,000.

At a meeting of the river and harbor committee of the Merchant's Exchange, held this week, Chairman Drake was instructed to write Congressmen Lockwood and Daniels in order to learn what progress, if any, had been made in the Stony Point breakwater scheme. The same committee appointed a delegation to go to Albany in the interest of the canals. Messrs. M. M. Drake, P. V. Carroll, Edward Gallagher, A. A. Swan, Harvey J. Hurd, and Robert R. Hefford were named as the delegates. They were instructed to urge the necessity for a liberal appropriation for the canals. The delegation will be given a hearing before the committees of both houses of the State Assembly.

The certificate of incorporation of the Erie Construction Co., incorporated by Charles F. Whitcher, Charles C. Conroy, Benjamin Kittinger, Joseph G. Taylor and William Hemming, under the laws of West Virginia, with a capital stock of $100,000, was filed with the county clerk this week. Other capitalists are, no doubt, behind the concern, as the incorparators own but two $50 shares each. The principal office of the company will be located at Buffalo. The certificate states that the company was organized for the purpose of building and equipping railroads, constructing docks, water and steam powers, dredging in lakes and rivers, constructing sewers, water, and electric works; operating mineral springs, the general manufacture and sale of machinery, operating tug boats and freight vessels, mining coal, sand, and stone; mining and manufacturing into metal iron, copper and lead; manufacturing railroad equipments, building, operating and leasing hotels; the construction of dwelling houses, factories, and other buildings; and purchasing and improving lands for town sites, mining and manufacturing purposes, and the laying out of a town not to exceed 640 acres in extent, and selling, leasing, or otherwise disposing of lots therein. Buffalo people think it rather a gigantic enterprise, for all the stock which is provided for, but of course this can be increased at pleasure.

A receiver has been appointed for the Buffalo & Niagara Navigation Co. The liabilities are $107,500; assets $22,000.

ASHTABULA, O.

Special Correspondence to The Marine Record.

The new fog signal station is now in its place on the end of the pier.

Contractor John Stang came down last Friday noon from Huron and remained here over night. He came down with the hope and expectation of finishing the clearing up of the wreck of the Pelican, and of settling up all matters pertaining to the work. Stang receives about $1,200 for removing the Pelican.

C. J. McNutt has secured the contract for furnishing all new machinery for the fishing tug Dandy, owned by C. J. Alexander, at Dunkirk. The contract calls for boiler, engine, shaft, wheel, etc., all of which is to be in place and ready for use March 15th. The engine is to be a duplicate of the one Mr. McNutt built for the fish tug Hope, built at Laird's shipyard here last spring. It is a single high pressure engine of 25 horse power. Mr. Alexander came here from Dunkirk yesterday and closed the contract. He had seen the tug Hope, and it was due to this fact that Mr. McNutt received the contract, no other bids having been asked for. Another fact highly complimentary to Mr. McNutt is that Mr. Alexander was advised by Dunkirk machinists to come to Mr. McNutt's shop to get his machinery built.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

The steamer Tom Adams, which completed extensive repairs at the south yard a week ago Saturday, had her engine fitted out during the past week and steamed away for Chicago, where she is to load. Pole spars greatly improve the appearance of the steamer.

Monday's southwester detained the steamer Roanoke at Grand Haven and the steamer F. & P. M. No. 3 at Ludington. The steamer Wisconsin left for Grand Haven at 12 o'clock last night.

It may seem a little singular, but it is nevertheless a fact, that the amount of westbound freight now being handled by the Ludington and Grand Haven steamers is in excess of the freight eastward bound.

TORONTO, ONT.

Special Correspondence to The Marine Record.

The Board of steamboat Inspectors, which has been in session during the past ten days, had under consideration various questions arising out of the administration of the Act, and compared notes so as to secure uniformity of inspection and improved working of the Act in future. Incidentally the Minister took advantage of the presence of the inspectors here to submit a proposed consolidated Act for their consideration and criticism, with a view to its presentation to Parliament in the event of the Government approving it.

Sir C. H. Tupper, minister of marine and fisheries, some time ago gave instructions to have the preparation of the departmental report expedited in order that it might be ready for distribution among the first of the Blue Books, and allowing for the publication of the fisheries statistics in supplementary form. Delay in the reception of some of the officers' reports has rendered it impossible to issue the first portion of the the departmental report as early as was intended, and accordingly it has been decided by the minister to withhold the first part now and publish the entire report in one volume.

The Canadian fisheries exhibit at the World's Fair has just been returned to the department of marine and fisheries, and the force is busy packing the articles away.

ALPENA, MICH.

Special Correspondence to The Marine Record.

The Marine Engineers' Beneficial Association held their election late last week, which resulted as follows: Past president, T. H. Kneale; president, A. J. Irwin; vice-president, John Maher; recording and corresponding secretary, A. W. Smith; treasurer, David Thompson; chaplain, Ira Basset; conductor, Robert Urie; door keeper, Horace Carter.

The new lifeboat which was received this week for the Thunder Bay Island crew is certainly a beauty. The boat was built expressly for the World's Fair exhibit, and is consequently put up in the most symmetrical and strongest form. It is a perfect model and has been described by World's Fair writers as the finest life-boat in the English service. It is 34 feet long and weighs 11,050 pounds, and it is said to have cost $5,000 to build her. The keel is entirely of brass, and she is fitted with two copper air chambers which run nearly her whole length. Her air valves are of copper and are set in even with the deck floor. The woodwork, hull, etc., are of the clearest mahogany, which is not only durable, but gives her a rich appearance. Crews who worked on her at the Exposition claim that she cannot be rolled as are the boats now in use. It is evident that the officers of the life-saving service have their eyes on the captain and know his needs pretty well. With this new boat the boys can battle with any kind of a sea and go anywhere duty calls them. In fact, however, the little matter of a boat has never stopped them from answering a call, and they are certainly deserving of anything that will afford them better protection. Thunder Bay Island is considered by vesselmen one of the most important stations on the lakes, and frequently the crew are called out for a ten or fifteen mile pull in answer to a signal of distress.

Perhaps a few figures on the work done at this station during the past few years will impress its importance as a station upon the few who do not understand its position. Comparatively few vessels are wrecked on the island, as it is supplied with both lighthouse and fog whistles. During sixteen years but nine vessels were stranded on this island. Over at North Point twenty-three vessels were found stranded or disabled, and thirty-three vessels were picked up water-logged or disabled. During this time assistance was also rendered to twenty-one fish boats, a grand total of $2,902,474 worth of property which has been benefitted by the Thunder Bay crew, one of the finest in the service, and serving under one of the best and the oldest captains in the tenth district.

The people of Alpena are considering a proposition on the part of the lumber firm of Alger, Smith & Co., to remove their mills, which are to be taken away from Black river to this city, in case they receive sufficient encouragement from the citizens. The offer of the firm is that they will transfer all their rafting operations from Black River to this city, provided they are given a bonus of $5,000, the site for a depot and car shops, the right of way from the terminus of the Alpena & Northern railroad to the Avery mill and for a mile along the shore for a booming and rafting ground; right of way to the paper pulp factory, to the stave mill, to the extract works, to the Albert Pack's mill, to the Excelsior works; to the dam with logging privileges, to the Alpena Cedar Co.'s ground and to the Potter mill. The firm employ in their rafting operations alone at least 100 men the year around, besides those employed in the woods. The cutting of the short logs into lumber will keep one saw mill busy during the usual mill season; and that means the employment of 100 more men. The company has sufficient timber in Presque Isle county to last from five to seven years.

CLEVELAND, O.

The annual meeting of the Vessel Owners' Towing Co. will be held next Thursday, Feb. 1.

The draw of the Superior street viaduct remained closed Sunday in order that the boiler might receive repairs.

The schooner Queen City has had her masts shortened, her topmasts also being cut down.

The weather has been so mild that fishing tugs ply their vocation as if it were summer. The tug F. S. Sterling came down from Monroe, Mich., this week and returned. She reported that there was little or no ice at the head of Lake Erie.

At the Globe shipyard the work on the Great Northern passenger steamer North West, continues to advance. President Hill visited the yard on Wednesday and took his first look at the new steamship since she was launched, and expresses himself as highly satisfied with her appearance. He was accompanied by General Manager John Gordon, of Buffalo. The columns of the engines are in place, and the work of putting in the Belleville tubular boilers is well advanced.

Stocks are being prepared for the construction of the largest of the three tugs which tho Globe Co. will build for L. P. & J. A. Smith. She will be put up just at the stern of the steamer North America. The work of bending her frames is now under way. The material for the new freight steamer has not yet arrived. She is to be built under the United States Standard classification.

The steam barge Albert Y. Gowen is in the Cleveland dry dock. She is receiving a new wheel, repairs to her stem and stern bearings and some calking.

OSWEGO.

Special Correspondence to The Marine Record.

Capt. Timothy Donovan and his brother John, of this city, have purchased the steam barge John E. Hall of Detroit for $20,000. She was built in Manitowoc in 1889, rates A1, and her valuation and register is $24,500. Her carrying capacity is 400,000 ft. of lumber. The barge is laid up at Detroit. She will tow the barges American and John R. Noyes, taking the place of the tug M. J. Cummings which was burnt at Cape Vincent last fall.

Botting & Coad are building a handsome yacht which will be added to Oswego's already fine fleet next season. The dimensions of the yacht are as follows: Extreme length, 30 feet; water line, 17 feet; keel, 11 feet 4 inches; beam, 8 feet; depth amidships, 4 feet; overhang aft, 6 feet; overhang forward, 12 feet 6 inches; draft 5 feet without board, and 8 feet with board down; cabin top 10 feet long; above deck 1 foot. The keel, stem and sternpost are of white oak and the planking is of white pine in 1¼ inch strips fastened with 12 penny nails.

NOTES FROM ALL PORTS.

An ice boat regatta is one of the sports planned at Kingston for the near future.

The Centennial copper mine, in Houghton County, Mich., has renewed operations.

The Board of Supervising Inspectors has been holding its annual meeting in Washington this week.

Soundings have been taken in Menominee river with a view to a resumption of active dredging operations in the spring.

A team crossed Green Bay on Friday, the 12th inst., this being eight days later than the first crossing was made last year.

John A. Worcester, receiver of the Davis Boat and Oar Co., will sell the entire plant, receiving bids up to 12 o'clock noon of February 6.

Fairport and Ashtabula have each had delegates at Washington trying to secure larger appropriations from Congress for their respective harbors.

The scow Hattie is to be sold to the highest bidder by U. S. Marshal H. G. Blanchard, at Detroit, at noon on Friday, Jannary 26th.

Mr. Joseph B. Rinn, mate of the Hiram Sibley, and son of Mr. Joseph Rinn, Corruna, was married on the 10th inst. at St. Clair, Mich., to Miss Ash, of that city.

The Conneaut *Herald* says: "The sand scow Enterprise lies imbedded in the ice in the creek, near the old lime kiln, where it ran onto a tree last summer and sank."

The steamer Santa Maria, built at Marine City for Port Huron parties, has been assigned the official number 116,606. Her gross tonnage is 982.77, and her net tonnage 79,089.

The Spalding-Butcher Boy collision case, which has been dragging in the courts since the fall of 1889, may be taken up at the present term of the United States district court. The collision occurred at the Sturgeon Bay Canal.

Water will be let into the new water power canal at Sault Ste. Marie, Ont., in a few days. The machinery is in position, and everything will soon be in readiness for starting. Five hundred horse power will be developed, most of which will be used in operating the town's electric light plant.

Capt. Henry Stanley, keeper of the Sherwood Point light, is one of the oldest employes of the general government in the Sturgeon Bay region. He has been in harness for more than twenty-five years, and although upward of seventy years of age, performs the duties incumbent upon him with marked fidelity.

The copper product of the Calumet & Hecla Company will be carried next season by steamers belonging to the Jenks Ship Building Co., of Port Huron. The copper is taken on at the company's Portage Lake docks and delivered at Black Rock. Ninety-five cents per ton is said to be the freight rate—a low figure. The steamers to be placed in the trade are said to be the Runnels, Desmond and L. S. Porter.

The Alexandria Bay Steamboat Co. has appropriated $4,000 for repairs and improvements on its two steamers. The old Wanderer will be built out two feet on each side, and the new Wanderer will have a new steel bridge in her hull, which is intended to strengthen her for increased speed. Next season the old Wanderer will run from Clayton to Ogdensburg, instead of from Alexandria Bay, as heretofore.

The first edition of the Detroit *Jonrnal*, on Thursday last, by some inadvertence, used pictures of H. D. Goulder and Capt. George P. McKay, who were in that city attending the Lake Carriers' convention, as illustrations of an account of a Missouri train robbery. The mistake caused considerable merriment among the vessel men, and all the copies of that edition sold like hot cakes. The well known phiz of James Millen of Detroit, also appeared as an evangelist.

There is a report current at Sturgeon Bay that the owners of the big lake tug Boscobel are seriously contemplating converting the craft into a freight and passenger boat. The Boscobel is wintering at Marinette.

The Canadian ship canal at Sault Ste. Marie is rapidly nearing completion and will be open for navigation next summer. The last stone has been laid in the lock pit. The work was commenced about five years ago, and has been carried on steadily ever since under the constant supervision of competent government engineers.

Mr. Mann who represents Duluth capitalists, has been testing a nickel property north of Worthington, Ont., not far from the Sault. It is claimed that these capitalists are in turn backed by Rockefeller and other eastern monied men. They are interested in a patent for reducing ore to nickel whereby they can produce pure nickel, it is claimed, at one-fourth the present cost by the smelters now in use. It has an additional advantage in that the entire plant can be put up at an expense of $14,000.

At the annual meeting of the stockholders of the Clyde Iron Co., Duluth, Minn., Mr. Geo. D. Kirkham was elected secretary for the ensuing year. Mr. Kirkham was for a number of years secretary and superintendent of the Vessel Owners' Towing Co., Chicago, and until last October connected with H. Channon Company, Chicago. He has become interested in the above firm and will manage the ship chandlery department. With Mr. R. A. Webster superintendent of the machinery department, the Clyde Iron Co. is well prepared to care for the wants of vesselmen at head of the lakes.

The report credited to the Sturgeon Bay *Advocate* that the owners of the steamer Arthur Orr, which sunk the steamer Thomas H. Smith off Racine North Point, in November during a dense fog, had offered the owners of the Smith $10,000 in settlement and that the offer had been rejected, meets with a plump denial from the owners of the Orr and the underwriters interested in the big steel steamer. In a recent conversation at Chicago, concerning the status of the collision case, Capt. C. W. Elphicke stated that overtures for a compromise settlement were out of the question so far as the Orr owners are concerned, and that in consequence the case must be decided upon its merits in the courts.

The proposed removal of the tariff on lumber in the Wilson Bill has but little terror for Saginaw Valley lumber men. There are few of them that are not interested in Canadian pine, and their business had reached the point where Canadian interests must receive some concessions from the United States or the sawmills of the valley quit business. Since the export duty on logs was taken off by the Canadian Government, valley mills have practically lived on Canadian pine. During the past year upwards of three hundred million feet of logs have been brought across Lake Huron and converted into lumber by the mills of the Saginaw river and the shore towns. Canadian logs have furnished labor for the employes of fully fifteen large saw mills. Unless there is an export duty placed on logs this winter the amount brought over next summer will undoubtly exceed that of the past year. Nearly all of the lumbermen have arranged for cutting as much or more during the winter. The business of rafting logs across the lake employs hundreds of men, who sort the logs and man the tugs which do the towing. One firm in Bay City, the Saginaw Bay Towing Association, have ten powerful tugs for the work. About half the output comes from Spanish River and the remainder from French river and Little Current.

MINERAL RESOURCES OF THE UNITED STATES.

The annual report of the Bureau of Mining Statistics for 1892 shows that the total value of all the mineral products of the United States for that year was $684,778,768, an increase of $28,174,070, and $20,000,000 greater than in any previous year.

Among the large gains was that of 877,130 tons of pig iron, with an aggregate product of 9,157,000 tons, valued at $131,161,039. Gold showed a slight loss and the year's product, valued at $33,000,000, was 1,596,375 ounces. Copper gained 57,465,666 pounds, making an aggregate of 353,275,742 pounds, with a value of $37,977,142. Lead product during the year gained 10,856 tons, aggregating 312,262 tons, with a value of $17,060,960. There was a loss of 7,000 tons in zinc, and the new metal, aluminum, almost doubled in quantity. Bituminous coal increased 8,000,000 tons during the year, attaining a total 113,237,845 tons, valued at $125,195,139. Petroleum is declining rapidly. In 1891 there were 54,000,000 barrels produced, but only 50,509,136 barrels, valued at $26,034,196, in 1892.

THE FITHIAN FREE SHIP BILL.

Richard P. Joy is out with another able pamphlet in which he argues at length against the Fithian Free Ship bill, and, what is better, proposes a substitute recommendation. A gist of the pamphlet follows:

"The deplorable condition of the merchant marine of the United States has long called for some measures of relief, and now that a bill is proposed by which it is hoped to restore the marine by free ships, it seems only proper that a few side lights be thrown on the measure.

"The report of the Commissioner on Navigation, dated June 30th, 1892, shows that American tonnage engaged in foreign transportation fell from 71.56 per cent. of the total tonnage entered at the ports of the United States in 1856 to 20.61 per cent. so entered in 1892. The value of merchandise imported into and exported from the United States in American vessels fell from 73.7 per cent. of the total value of imports and exports in 1856 to 12.3 per cent. during the year ending June 30, 1892, showing American shipping engaged in foreign commerce practically destroyed. According to the statement of the Post Office Department, the Government paid for sea conveyance of United States mails, in the transatlantic service, to foreign steamship companies during the last fiscal year, $449,405.19, and practically nothing to American vessels. It is estimated that the receipts from passengers and freight in the transatlantic trade alone amounts to $200,000,000, the whole of which is paid to foreigners.

"This condition of our merchant marine is indeed appalling; we are now dependent for the transportation of passengers, mails and freights upon foreign vessels. Should such a condition be permitted to exist? Is it a wise policy to pay abroad this enormous amount yearly? Should not some effort be made by which the United States could claim at least its fair share of this vast commerce?"

Then follows a review of the causes which led to this condition of affairs, after which Mr. Joy continues:

"There are two branches of our merchant marine, our coastwise trade and our foreign trade. The coastwise trade has been absolutely protected from foreign competition since the foundation of the Government by prohibiting foreign vessels engaging in it; this wise policy has built up a coastwise marine unequalled by any country in the world, and has saved to the people of the United States vast amounts of money which would otherwise have gone abroad for ships and transportation, besides giving employment to our people.

"Our foreign shipping, being unprotected from foreign competition, has been lost to us by the want of proper legislation, as we cannot compete with cheaply built and cheaply operated foreign vessels. There was a time when American commerce was carried 90 per cent. in American vessels; it is now carried 90 per cent. in foreign vessels. We are surely not practicing economy as a nation by paying yearly $200,000,000 abroad for transportation, nor is the Government by subsidizing foreign mail lines with good American gold which should by all sense of right be paid into American pockets.

"By extending protection to their great steamship lines foreign nations achieve two highly beneficial ends at one stroke, namely, pay into their own pockets for transporting their own commerce, and also receive pay for transporting American commerce, besides having naval reserve cruisers in case of war, as the addition of guns transform their vessels into efficient ships of war. Now let us see how foreign steamship lines, protected by subsidy, can live where unsubsidized lines must fail. The following figures are from the inaugural address of the president of the Institution of Engineers and Shipbuilders in Scotland: 'The total sum of subsidies paid by Great Britain, France, Germany, Russia and Italy is $16,657,865, of which Great Britain pays nearly twenty per cent.' This does not include the bounties paid. The president says further: 'The survival of the cheapest is the modern application of the Darwinian theory to shipping, and the small capital account of the low speed cargo steamer gives her for a time a powerful lever against the vessel built with less regard to cost than to thorough excellence of design and workmanship.' In building a steamship in America it has always been the pride of our naval architects to turn out a ship of the best design and superior workmanship, and to slight no part of the construction. Thus our ships cost more to build than do the cheap built foreigners, 'which are built by the running mile and chopped into the length desired by purchasers.'

"The cost of a cheap steamship in England is about twenty per cent. less than in America, for the reason that material is cheaper in England and labor receives pauper wages, and as labor is ninety per cent. of the cost of construction, it gives British shipyards a great advantage over American, where are paid comparatively high wages. For the same reason a ship can be operated more cheaply under the British flag than under the Stars and Stripes, and the British Lloyds help on the good work of protecting the British marine by grauting a better rating to poorly built British vessels than to the superior product of the American shipyard. These natural advantages are aided in some countries by bounties paid to ship-owners.

"It is most important that the United States should enter the foreign carrying trade, that a fair share of the vast sum of $200,000,000 now paid annually to foreigners for transporting American commerce be saved to the citizens of the United Sfates. The present Secretary of the Navy, Mr. Herbert, states that since the construction of our new naval vessels began the price of material has fallen one-half and the cost of ships has decreased thirty-three per cent; would not this be still further reduced if Congress will grant vessels of the United States the benefit of a system of discriminating duties and encourage ship building in this country?

"It is of the utmost importance that we have well equipped shipyards in case of war, and in order to keep these shipyards in such a state Congress must either furnish work by granting contracts for new naval vessels or do what would benefit the country a thousand times more and give the people encouragment to invest capital in shipping; we would then have seamen and ships in case of war.

"Millions of money are looking for investment, and should Congress pass a bill favorable to American shipping, the seas would again be plowed by American keels.

"If Congress would really legislate in the best interests of the merchant marine and people of the United States, a bill providing as follows would encourage the upbuilding of our merchant marine at home, and the enormons sum now paid abroad would be saved to our people, besides having shipyards, seamen and ships in case of war.

"It should be enacted that dutiable goods imported in American built, owned and manned vessels be permitted to enter the United States under ten per cent. less duty than dutiable goods imported in foreign vessels for the first year; and nine per cent. less duty on goods imported in American vessels, and one per cent. higher duty on goods imported in foreign vessels, for the second year; and eight per cent. less duty on goods imported in American vessels, and two per cent. higher duty on goods imported in foreign vessels, for the third year, and so one until the tenth year, when goods imported in American ships would pay the regular duty and foreign vessels importing dutiable goods would pay ten per cent. higher duty. But, as only about fifty per cent. of goods imported are dutiable, we should also put a tax upon free material imported in foreign vessels; that is, free goods imported in foreign ships should be compelled to pay an additional duty of one per cent. the first year, two per cent. the second year and so on until the tenth year, when ten per cent. higher should be charged; but free goods should always be imported free in American vessels.

"This method of discriminating duties would transfer the carriage of American commerce from foreign ships to American ships, and would not diminish, but increase, the revenues of the Government, and would save $200,000,000 to the people of the United States, which is now paid to foreigners yearly for transporting our commerce.

"Such a bill would cover every class of vessels, from the great mail steamer to the smallest schooners, bearing alike its favors to the rich and poor.

"The treaty which binds American people hand and foot by preventing legislation in their own interests can be annulled if Congress but wills it." Continues Mr. Joy: "Great Britain has already violated the spirit of the treaty by granting subsidies and subventions to her shipping. Why should the United States not annul this treaty which has driven our shipping off the seas by preventing legislation in favor of our marine? It is a duty Congress owes to the people: let us assert our rights and throw off the yoke.

"The question of restoring the marine of the United States to the seas is one not only of sentiment and patriotism, but one of national economy; it is the greatest folly to pay abroad for transportation that which rightly belongs to Americans.

"In the scramble to engage in our free foreign carryrying trade, foreigners have no doubt overstocked the ocean with ships, but is that any argument why we should continue to allow them to monopolize our trade or to continue to pay them 200 million dollars for transportation yearly, which should be paid into American pockets?"

THE MANCHESTER SHIP CANAL.

The opening of the Manchester Canal was rosy enough, and everything went smoothly; but, according to the papers, the next day's experience when the feteing was done, and the actual business began, was less satisfactory. It is said that the Granada which left Liverpool for Manchester on Tuesday, ran aground in the ship canal near Partington coal basin, and that the barque Sophie Wilhelmine is lying at another point in the canal in consequence, it is alleged, of insufficiency of water between the locks. Touching the Sophie Whilhelmine, I extract the following from Tuesday Liverpool *Journal of Commerce*: "There has been great trumpeting about this timber-laden vessel; the captain was, it is said, paid to have his masts cuts—now there is insufficient water, and I believe that the poor master has just discovered, and only just, that when he has discharged his cargo at Manchester, if he ever gets there, his vessels will lift 12 or 15 ft., and as there is no cargo to be had there, he will, I suppose, have to take his masts out to get back under the bridges."—*Fairplay.*

The shipping men of Liverpool are taking active measures to counteract the tendency of the Manchester Ship Canal to detract trade from their port, so that the canal will not find it easy at first to earn dividends and interest on its $75,000,000 of investment. Ocean freights to Manchester are 6 shillings per ton higher than to Liverpool, while on the other hand railroad freight rates to be established between Liverpool and manufacturing centers will be lowered and dock charges will be reduced.

THE PRESERVATION OF IRON.

In many cases the object of painting iron is to prevent its rusting, fully as much as to improve the appearance; but in a great many cases the main object is not attained, as the iron will continue to rust under paint. Especially is this the case with coal tar when applied to cold iron, and nearly always the case when oil paints are used, unless a special compound is employed. If oil paints are used on iron work exposed to the weather, special treatment is necessary if the paint is to adhere firmly and act as a preventive of rust. The first step is to clean thoroughly, and then if badly rusted to apply a thin mixture of lamp-black with plenty of "turps" and dryers and a little oil, and after this dries apply red lead with half oil and half "turps," with the requisite proportion of dryer, each additional coat containing less "turps." This will give a lasting job, as the lamp-black arrests and prevents the rusting, because the thinned coating penetrates deeper and makes it adhere, while the gummy coating left from the evaporation of the "turps" makes an efficient non-corrosive protective coating.

SOUTH HAVEN'S HARBOR.

Congressman Thomas recently presented an able argument before the House Committee on Rivers and Harbors in favor of an appropriation for the improvement of the harbors at South Haven. He said that when the appropriations made for the twelve harbors on the east side of Lake Michigan were considered, South Haven had received less than any of the others except Saugatuck. The importance of the harbor was shown by the increase in the number of vessels trading with the port. Vessels of all kinds showed a tonnage in 1892 of 231,380, and in 1893, 281,730, an increase of 50,350; that the harbor is the natural lake port for all that portion of Michigan tributary to the Michigan Central railroad. Dr. Thomas said that the village of South Haven had made marked improvements, having expended during the last year for improvements, such as water works, hotel, dwellings, etc., $199,500. There was an export of lumber in 1889 of 5,500,000 feet, and in 1893 an import of 7,353,000 feet, with an export of peaches of 118,000 packages, with a large amount of apples, pears, potatoes, etc. The amount paid by brokers for fruit, was $455,156, with a general volume of trade in the village of more than a million dollars. The showing of freight received and shipped from the harbor was given in items, making a evrystrong showing in favor of a good appropriation for the harbor.

INCOMPETENT MARINE REPORTERS.

The New York *Marine Journal* appeared last week with a scorching editorial upon the ridiculous breaks which ship news reporters on the leading New York dailies and the press associations perpetrate upon their readers. It says, among other things:

"When such leading dailies as the *Herald* and *Evening Post* make such unpardonable breaks in their shipping reports as to say that 'the mizzen mast was housed,' which was one of the statements in those papers credited to the report of the ship Muskoka last week, it is time to ask them for their own sakes, to have a little more respect for the reputation of their journals than to permit such a state of affairs to continue. If such absurd nonsense were to be perpetrated in almost any other branch of newspaper writing, the writer would be "fired" without warning; but in ship news reports and descriptious of machinery accidents, the most nonsensical statements are allowed to pass muster repeatedly. If, for instance, a reporter sent to a musical entertainment were to write that 'Miss A——, who was in fine soprano voice on the occasion, sang an exqusite minor solo in the key of D sharp,' or if a man sent to report a law trial were to make such a statement in his 'copy' as that 'the writ of replevin was subpoenaed and the action was accordingly set for a hearing on *ex post facto* proceedings,' such a writer would be immediately and forcibly suppressed. But the same man might write a shipping report and state with perfect impunity that 'the garboard strakes were safely hoisted to the lee truck,' or 'while hove to on the starboard tack she was pooped by an immense sea which carried away the dolphin striker close by the bitts,' or 'she was delayed for an hour by the breaking of the vacuum crank pin of the exhaust cylinder,' and no questions would ever be asked. Such nonsensical reports have been and are printed in the New York dailies simply because neither the men who write nor the men who edit them know the difference. The statements have a sort of nautical ring about them, and they pass as correct.

"It may be true, as daily paper men have said, that such errors are not noticed nor appreciated by nine-tenths of their readers, and that if the city editor does not know the difference it is not likely many other people would; but if so, more's the pity. A city editor who is at the mercy of his ship news reporter, ought to look out that he has a reliable and worthy man to cover that department. It is not because our great dailies, cannot afford it that they have incompetent men in this department."

LITERARY NOTES.

Transportation, a new illustrated monthly, devoted to the history and progress of railway, vessel and vehicle locomotion, and ærial navigation, published in New York and Chicago, promises to take a permanent place among the periodicals of the United States. It is well printed, splendidly illustrated, and its contents are varied and interesting.

The *Inter-Ocean*, that great Chicago Newspaper, has not suffered by the recent era of financial depression but has gone right along adding to its foundation stones—a large and substantial circulation—with a stride that under the circumstances is truly wonderful. At one time additions to the subscription list were coming at the rate of 800 to 1,100 per day for the daily issue, and as high as 1,500 per day for the weekly *Inter-Ocean*. The result of this is to place it easily at the head of the list of great Chicago newspapers. It is certainly a good, clean, family newspaper of the highest order.

ASSISTANT STEAMBOAT INSPECTORS.

A circular emanating from the Treasury Department says:

"You are directed hereafter to cause all applicants for the position of assistant inspector in the various supervising inspection districts, whose names may be referred to you for that purpose, to be examined by the supervising inspector of the district in which application is made. The examination shall be non-competitive and cover their practical qualifications only, and pertain to the duties of assistant inspectors required by law and by the rules and regulations of the board of supervising inspectors. Each applicant must write a fair legible hand, spell correctly, and be able to calculate the various problems and examples relating to his particular branch of the service set forth in the general rules and regulations prescribed by the board of supervising inspectors. Each applicant shall, in the presence of the supervising inspector conducting the examination, write a letter, without help or suggestion from any person whatever, addressed to the Secretary of the Treasury, stating his experience and qualifications. The letter shall contain not less than one hundred words, which shall include the address and signature. During the course of the examination the candidate may have access to the rules and regulations, but shall have no assistance from any person whatever to aid him in his work. The time of the examination shall not in any case exceed a single continuous session of six hours.

"Upon the conclusion of the examination the papers used therein shall be sealed up by the supervising inspector conducting the examination, and transmitted to the supervising inspector general. As soon as practicable after their receipt, an examination of the papers shall be made, and the supervising inspector general shall then transmit them to the secretary, and report the standing of the candidate, as shown by the papers, with such recommendation in the case as he shall consider justified by the circumstances.

"Every applicant shall, before entering upon the examination, satisfy the supervising inspector that he has had, if an applicant for assistant inspectorship of hulls, at least three years' experience as a practical master shipbuilder and superintendent of construction of hulls of steam vessels, either wood or iron, or has been a licensed master or pilot of the highest grade granted upon the waters upon which he has been employed of not less than three years' actual practical experience, under license, which fact must be of record in the Treasury Department. If an applicant for assistant inspectorship of boilers, he must satisfy the supervising inspector, before examination, that he is a practical master boiler maker, having had at least three years' experience as superintendent of construction of marine boilers, or is a licensed engineer of steam vessels of the highest grade on the waters upon which he has been employed of not less than three years' actual practical experience, under license, which fact must be of record in the Treasury Department."

MR. ROCKEFELLER BUYS STOCK.

Stock of the Lake Superior consolidated iron mines is worth par, or at least J. D. Rockefeller has purchased $2,200,000 of the stock at that price, and a deal of such proportions should go a long ways toward fixing a market value. By the terms of the deal the Superior steel plant no longer figures as an element in the consolidation. The $540,000 of steel plant bonds which were turned into the consolidation are bought back, and for them Mr. Rockefeller gives consolidated bonds dollar for dollar. This reduces the total of the bonded indebtness of the Superior consolidated mines to $3,700,000, and of the total all of which is held by Mr. Rockefeller $2,200,000 are turned in to the consolidation, and in exchange Mr. Rockefeller receives stock at 100 cents on the dollar.

The next article of the agreement relates to the bonds and stocks of the Aurora, Penokee and Gogebic, and Spanish-American companies. This interest is almost exclusively a bond one and it is in no way affected by the Penokee and Gogebic receivership. These bonds which Mr. Rockefeller has been holding as special collateral to secure his bonds of the Superior consolidation are relieved, and the bonds which Mr. Rockefeller still holds he retains with no security, but the property is included in the consolidation and upon which the bonds are issued.

It is further understood that as soon as the new bond mortgage of the Missabe & Northern is approved the entire floating indebtedness of the road will be funded in the bonds secured by this mortgage. The surplus money received from these bonds in which will be funded first of all the floating obligations of the road will be used in purchasing the extra equipment which will be needed for next season's output. It is possible that a portion of the money will be used in double tracking certain parts of the line, but this point has not yet been definitely decided.

The effect of all this is plainly apparent. First, Mr. Rockefeller's relationship to the Lake Superior consolodation is clearly defined. He is a stockholder and his interests as a stockholder are greatly in excess of those which he has as a bond owner. His interests are now identical with those of the Duluth men whose prospects went into the consolidation and who hold its stock. To the extent of over $2,000,000 he desires to make the stock a dividend paying one, and there is little doubt of the result.

TORONTO'S HARBOR.

Harbor Master Morgan Baldwin has just issued to the labor commissioners of Toronto the forty-third annual report. It is replete with information, some of which is of more than local interest. An outstanding fact in the report is a decrease of 335 in the number of loaded schooners which arrived during the year. The bay was clear of ice on the 7th of April, and was frozen over on the 8th of December, 28 days earlier than the previous year. The first vessel with freight to arrive was the Lillian, with stone, on the 4th of April. The Van Straubenzie arrived in light from Oswego on the 1st of April.

The number of arrivals at Toronto was 2,577, as against 2,918 the previous year.

	1892.	1893.	Inc.	Dec
Steamers loaded	1,289	1,340	51	....
Steamers light	2	10	8	....
Propellers loaded	121	133	12	....
Propellers light	94	55	....	39
Schooners loaded	1,347	1,012	....	335
Schooners light	63	27	....	36

The number of vessels wintering at Toronto is 73, viz., 22 schooners, 9 steamers, 4 propellers, 11 steam-yachts, 19 sail yachts and 8 tugs—altogether of about 11,267 tons. There are also 4 dredges and 20 scows.

The harbor master makes the following suggestion in his report: "As the sewer, which empties into the water just west of the queen's wharf, is becoming an active factor in reducing the depth of water at the entrance of the harbor, I think it would be advisable to extend the wharf some 200 or 300 feet to the west, which will, for some time to come, counteract this. This extension will also obviate the danger of any vessel striking on a stone shoal to the west of the channel, on which a black buoy is placed during navigation."

REDUCED APPROPRIATIONS.

The House Committee on Rivers and Harbors has decided, in view of the general necessity for retrenchment, to bring in the smallest river and harbor bill known in many years. After carefully considering the matter it was decided that the bill should not exceed $10,000,000 in the aggregate, and that it would be held down to $8,000,000 if possible. This is a decided reduction, as compared with recent Congresses. The bill, as it passed the Fifty-first Congress, aggregated $23,000,000, while that of the last Congress, including the continuing contract features, amounted to about $47,000,000. In order to hold down to the $10,000,000 limit this time, the committee will be compelled to keep each item of the bill down to 25 per cent. of the estimates of the engineers in charge, the total estimates being about $40,000,000. Heretofore the committee has generally appropriated 50 per cent. of the estimates. This time it is to be only one half of that.

If the plan decided upon is carried out, the appropriations for this section will be about as follows: Buffalo, $36,500; Charlotte, $8,750; Dunkirk, $27,000; Oswego, $21,000; Tonawanda and Niagara River, $50,000; Wilson, $7,000; Erie, $6,250; Ashtabula, $61,250; Black River, $11,500; Cleveland, $50,000; Conneaut, $50,000; Fairport, $25,000; Huron, $12,500; Sandusky, $6,250; Toledo, $75,000. Vermillion, $1,500.

THE NEW FIRE ISLAND LIGHT.

Fire Island, Long Island, New York, is to have an electric flash light in place of the present beacon which will be one of the most, if not the most powerful coast light in the world. Congress has appropriated the money and the new electric light to be put in will have 240,000,000-candle power. One of the largest lenses ever constructed has been recently purchased from France. This lens is over 9 feet in diameter, and was purchased ostensibly for the new light-station being erected at Hog Island, Va., but the board has decided to use it for Fire Island, and will transfer the lens now there to Hog Island. The new light will flash every five seconds and will be less than a second in duration. The flashes will comes with the rapidity of lightning, and will be so quick that bearings can be easily taken during intervals. The old light is visible under favorable conditions about eighteen miles, but the engineer of the Lighthouse Board estimates that the powerful electric-rays will be discernible fully twenty-four miles under similar conditions. By the aid of the new lens the light will be thrown on the heavens, and its reflection will be seen with ease by vessels approaching 100 miles away.

New York Maritime Register.

MARITIME LAW.

MILBURN et al. v. NORD-DEUTSCHER LLOYD.

District Court, S. D. New York. October 25, 1893.

CHARTER—DAMAGE TO CARGO—CHARTER HIRE—INDEMNITY FROM FOREIGN OWNERS TO THE CHARTERERS. Where the charterers of a foreign ship, being responsible to the owners for the charter hire, and having received freight upon goods delivered to the consignees, are liable to the latter for damage claims arising through negligence of the ship, and the owners are foreign, and have no assets in this country, the charterers will not be required by a court of admiralty to pay over to the owners the whole amount of the charter hire, except upon security indemnifying them against such reasonable and probable demands as may have arisen against the charterers through the fault of the owners in the transportation of the cargo.

MACE v. THE LOWELL M. PALMER.

District Court, S. D. New York. October, 1893.

COLLISION—STEAM VESSELS MEETING—PROPER SIDE OF CHANNEL—INATTENTION TO SIGNALS. A steamship and a tug with a tow met in the East river, the tow going up and the steamship coming down. When the tug was below the East River bridge, she three times gave a signal of one whistle to the steamship, which signals were disregarded, and no whistles blown to the tug until too late to be of any use. The steamship was on the left-hand side of the river, and improperly directing her course towards the Brooklyn shore. There were no obstacles to prevent her going on the New York side. The tug backed as soon as danger of collision became manifest. Held, that the steamship was solely liable for the collision.

In Admiralty. Libel by Alfred E. Mace against the tug Lowell M. Palmer for collision. Dismissed.

Brown, District Judge. On the 11th of May, 1892, the steamer Cilurnum, 300 feet long, and of about 1,370 tons register, bound down the East river, soon after passing the Brooklyn bridge came in collision with a railroad float in tow of the tug Alice M. Lowell, the starboard corner of the float striking the starboard side of the steamer and breaking in some plates, for which damage the above libel was filed.

There is a great contradiction in the evidence, both as to the place of collision and the relative positions of the two vessels during the few minutes previous. In all essential particulars, however, the witnesses for the respondent—many of whom are from other vessels and apparently wholly disinterested—evidently predominate, and are entitled to superior credit. They establish, without doubt, the fact that the collision was abreast, or very nearly abreast, of the Fulton Ferry slip, on the Brooklyn side, and not more than from two to four hundred feet from the dock; that the Palmer, being upon the Brooklyn side of the river, when at least a quarter of a mile below the bridge, saw the Cilurnum above the bridge, and three times gave her a signal of one whistle, indicating that the vessels should each pass to the right, that is, port to port; that the Palmer directed her course still more to the Brooklyn shore; that no attention or answer was given by the Cilurnum to these whistles, nor any whistles blown by her to the Palmer, except two whistles given when she was quite near—within two or three hundred feet—and too late to be of any use; that the Cilurnum was herself on the left-hand side of the river, and improperly directing her course somewhat towards the Brooklyn shore; that the angle of collision was nearly a right angle, and that the Palmer backed until at the collision she was heading nearly straight across the river towards the Fulton Ferry slip; and that there were no obstacles in the river to prevent the steamer from going to the right, on the New York side.

Under these circumstances, the steamer is plainly at fault for not observing the whistles of the Palmer; for not going to the right, as was her duty in that situation; and for making over, on the contrary, towards the Brooklyn side of the river. The Palmer seems to me to have done all that was incumbent upon her, in the endeavor to avoid collision; and the libel must, therefore, be dismissed with costs.

RULES FOR CHANGING A VESSEL'S NAME.

The Commissioner of Navigation has authority, under the regulations of the Secretary of the Treasury, to change the name of any vessel on application by the owner thereof through the collector of customs at the vessel's home port. Such applications must show the reasons for the desired change and that the vessel is not over twenty years old; if she is over ten years old, the repairs upon her must have amounted to not less than 40 per cent., and if she is fifteen years old, to not less than 60 per cent. of her first cost. Her existing name must have been given her at least five years prior to the date of application for a change, and if she has boilers, they must not be more than ten years old. The name of a mortgaged vessel cannot be changed, even with the consent of the mortgagee. The name of an undocumented vassel may be changed at the owner's pleasure, but if a steam vessel not entitled to be documented, then only at the time of making application for the annual inspection.

The Marine Record,

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TYPES OF LAKE TONNAGE.

THE MARINE RECORD, in presenting its readers with the supplement accompanying this issue, feels that there is combined with the handsome picture an instructive feature which makes the work doubly valuable, especially when demonstrating to those who are strangers to fresh water navigation the good points presented by the principal types of lake tonnage. The small steamer in the lead was one of the pioneer steam vessels of modern lake navigation. She was built by David Bell, of Buffalo, in the year 1862, and has been out of existence for a number of years. The Christopher Columbus gives a representation of the whaleback type, and on her starboard quarter is the new steamship Northwest, just now afloat. The City of Alpena and City of Toledo represent two of the finest sidewheelers on the lakes, and the Manitou is almost the finest boat that plies Lake Michigan. The Alva, Chemung and Centurion are some of the finest specimens of model lake steamers.

THE action of the House of Representatives Wednesday in putting ore finally on the free list must convince the opponents of such a measure that it will take some lively work, even in the Senate, to secure the retention of even half the duty. The idea of the members of the House evidently is that in this they have a margin for compromise purposes when the bill goes finally to a conference committee, as it undoubtedly will.

FROM present appearances, the appropriations for rivers and harbors, during this session of Congress, are likely to be meager, indeed. It seems a pity that money should be doled out for such enterprises when the direct returns to the people, in the shape of low freights, can so readily be figured out.

UNDER the circumstances which are certain to exist for the remainder of the winter, it is safe to say that there will be little or no contracting done for the transportation of either ore or coal during next summer. The situation is such that the shippers feel that they will make money by waiting and taking their chances next year in the open market. Whether they are right in their surmises or not, time only will tell.

THERE seems to be a growing disposition among the vesselmen to agree among themselves upon a plan by which such losses of money as were experienced last year may be avoided in the future. Last summer was the first season that actual loss stared many of them in the face as a result of a whole season's efforts, and they are naturally determined not to allow it to happen again.

THE plan submitted by the committee to whom was referred the task of forming an agreement to withhold tonnage from the market next year, certainly shows that the owners mean business, and that they intend to do something next summer to enable themselves to make a little money out of the carrying trade. There will be a good deal of work accomplished, it seems, before the general meeting to be held in February.

THE fact that in the spring of 1895 the new Sault canal, with twenty-one feet of water over the miter sill, will be opened for traffic, seems to render unnecessary any other argument as to the demand that the harbors of the principal ports should be deepened to correspond. Any delay by Congress just now in granting sufficient money for this purpose may mean serious loss to the people at large in the way of higher freights than they would otherwise be obliged to pay.

THE FREIGHT AGREEMENT.

The text of the agreement which was drawn up by the committee to whom the work of planning some means of averting last season's disastrous rates, which is merely the detail of the plan decided upon by them last week on the evening of the Lake Carriers' final adjournment, and which the RECORD was one of the few papers to say anything about, is given below. It is very inclusive in its provisions, but in order that it may apply more closely to the peculiar circumstances in which so many of the owners are placed, there will probably be other clauses added before its final submission for signatures. Among other things, there will probably be added a paragraph to the effect that at least half the total tonnage owned or controlled by the subscribers shall be retained in winter quarters until June 1. This would, it is thought, accomplish much, and should there be a stampede later, nearly one-quarter of the expense of operating the boats for the season would still have been saved:

"The following agreement is conditioned upon its terms being assented to in writing by ninety per cent. of the Lake Carriers' tonnage engaged in the carrying of iron ore, coal and grain:

"Subject to the foregoing, we, each agreeing for and hereby intending to bind and obligate all such vessels owned, managed or controlled by us respectively, do agree that during the season of 1894 twenty-five per cent. of such tonnage shall be out of commission the season.

"This shall be accomplished as follows:

"Where physical division can be made twenty-five per cent. of the tonnage shall be laid up continuously during the entire season.

"In case of single vessels, such vessels shall be laid up one full quarter of the season and at least one-half of the time shall be at the beginning of the season.

"In case of several vessels under one management, but of diversified ownership, they may be pooled or treated each as a single vessel. But in either case twenty-five per cent. shall be laid up during the entire season, or each vessel shall be laid up one-quarter of the season.

"Where physical division cannot be made so as to keep laid up continuously twenty-five per cent., such division shall be made so far as feasible, and any overplus shall be treated as single vessels.

"In every case, except physical division and keeping laid up twenty-five per cent. of tonnage continuously for the whole season, sufficient tonnage shall be held laid up at the beginning of the season to cover at the beginning of the season at least one-half of the required twenty-five per cent.

"It is understood that vessels holding grain cargoes or storage, and for spring delivery, shall have the right to deliver their grain cargoes before being required to lay up."

IN connection with the plank sheathing which is being put on the bottom of the straightback steamer Harvey H. Brown, now building at Wyandotte, there has been a good deal of argument as to how much, if any, deeper draught would be given the boat by the addition of the sheathing, which is composed of five-inch oak plank. A letter from Mr. Frank W. Kirby, the consulting and constructing engineer of the builders, states that, "providing there is an absence of hammers, wrenches, bolts and washers not used, paint from pots turned over and such like left over after we are all through, the three thousand tons on sixteen feet would be increased to sixteen feet five inches less .111, or a scant one-eighth." While this seems a good deal of space to take from the cargo each trip the steamer makes, it will no doubt tend to decrease to a minimum the danger of damage to the bottom by striking rocks and shoals, and it is very possible that she may make up the difference in the net profits during the season. A great many owners, however, would prefer to take some risk, or rather to allow the underwriters to do so, especially when inches count to the extent that they do in the Lake Superior trade, until such time as the larger canal opens for business.

A BUFFALO paper, impressed by the balmy atmosphere down there, suggests, in a gingerly way, that some of the boats now storing wheat at Duluth might make a mint of money if they would only come down the lakes during the winter. A closer study of geography, and of the meteological tables which the government issues for the information of the people, might be suggested as a cure for this mild type of lunacy. The Sault has been frozen over for some weeks, and the canal has been closed for the season. Just where the profits would come in, after fitting out a boat, worrying through the canal by employing a lot of extra help, and running the risk of damage by ice in the St. Mary's river, even if this were possible, would hardly be demonstrated, to say nothing of the risks of navigation to which a boat would be subjected in the winter season. A good many seasons will elapse before the boats resort to winter navigation to that extent in order to make a little money.

THE lake and mining circles seldom receive such a blow as they experienced yesterday on hearing the announcement of the sudden death of Hon. George H. Ely, whom the destroying angel carried off in the midst of a work that if not altogether unselfish, was for the general good as well. Mr. Ely's deep interest in the successful navigation of the lakes has made him a prominent figure in the history of navigation and mining, and it seems that at no time could these interests have so ill afforded to lose him. His accurate and comprehensive statements, coupled with his well known personal integrity, were convincing arguments in whatever field of debate to which he devoted himself. Mr. Ely will be missed for many years among the lake as well as the mining men, for both of whom he had for years been the statistical authority.

VESSEL men should take heart from the news received from Washington lately, that the free ore clause will probably be defeated in the Senate. Colonel R. C. Parsons, for the vessel owners, is doing a good work among the legislators.

DEATH OF HON. GEORGE H. ELY.

Early Wednesday morning the iron ore and marine circles of Cleveland were deeply pained to learn of the sudden death, in Washington, D. C., of Hon. George H. Ely, from heart disease. Mr. Ely had gone to Washing two week ago, representing the Western Iron Ore Association, in efforts to prevent the iron ore schedule from being made a part of the free list in the Wilson tariff bill, and accompanied by Col. Richard C. Parsons, who was bent on a similar mission on behalf of the vessel owners of the lakes. They were also two of the delegates attending the convention of the National Board of Trade. Both Mr. Ely and Col. Parsons have been working hard since their arrival there, and Mr. Ely felt somewhat exhausted when he returned to the home of his friend, Col. George L. Andrews, in the evening. He made no complaint, however, and apparently passed a good night. Wednesday morning he retired to the bath room to prepare for going out with Col. Andrews. He did not appear within a reasonable time, and Mrs. Ely, becoming alarmed, looked in over the transom and saw her husband stretched on the floor. An entrance was speedily effected and physicians summoned, who decided that death must have been instantaneous. Mr. Ely's death was a great shock to all the members of the Cuyahoga delegation in Congress, and to his colleagues on the delegation to the National Board of Trade, which adjourned for the day out of respect as soon as they learned of Mr. Ely's death. Hon. J. J. Sullivan, cashier of the Central National Bank, of which Mr. Ely was president took charge of the remains, and made all necessary arrangements for their transportation to Cleveland. The sad party left Washington at 7 o'clock Wednesday evening, and arrived at the Euclid avenue station shortly before noon Thursday, where they were met by the directors of the Chamber of Commerce, of which board the deceased was a member.

George Harvey Ely was born in Rochester, N. Y., October 18, 1825, his father, Elisha Ely, being one of the founders of that city. He entered Williams college in 1846, and was graduated from that institution two years later, returning in 1851 to receive the degree of master of arts. Later he engaged actively in the milling business, in Rochester. After some years the possibilities of the Lake Superior iron mines attracted his attention, and in connection with his brothers, Samuel P. and Herman B. Ely, he built a railroad leading from the mines toward civilization. This enterprise was completed in 1857, and after operating a short time as the Iron Mountain railroad, was absorbed by other lines. Numerous changes took place in the rapidly developing region, and that road and many other short lines are now a part of a great railroad system. Mr. Ely came to Cleveland in 1863, and became a partner of H. B. Tuttle, this partnership continuing until Mr. Tuttle's death, in 1878. Mr. Ely's advocacy of the enlargement of the old Sault canal lock had much to do with securing its enlargement by Congress. His efforts, twice exerted, in opposition to the project of bridging the Detroit river, were instrumental in defeating that scheme. He was president of the Western Iron Ore Association, and was one of the highest authorities in the United States on all matters connected with iorn and the traffic of the Northwest. His paper, read before the Paris Congress two years ago, on the trade, commerce, and rescources of the great Northwest, was printed in three different languages, and was regarded as one of the ablest, most exhaustive, and valuable of those submitted to the convention. At the time of his death Mr. Ely was engaged with his brother, S. P. Ely, in operating large iron mines in Cuba. He was also interested in Lake Superior mines, and he went to Washington in the interest of the retention of the ore tariff, believing that free ore would be ruinous to the Lake Superior mines, to the miners and their families, and to the carrying trade of the Great Lakes. His life was a model of purity, unselfishness, and devotion to the public in this. It would have been to the interests of his mine in Cuba to remove protection from iron ore, but he honestly and sincerely believed in protection, and his character towered above personal gain.

NEWS OF THE IRON MINES.

The Ingersoll Mining Co. has just organized with the following officers: H. L. Delano, of Muskegon, Mich., president; J. W. Strong, Muskegon, vice president; Geo. L. Erwin, Muskegon, secretary and treasurer; D. W. Ingersoll, Florence, general manager. The above named gentlemen and Charles Loughrey constitute the board of directors. The company will put in a plant of machinery at the Ingersoll immediately, when the work of development will be commenced and vigorously prosecuted. The 80-foot shaft at the new mine has penetrated excellent ore to the depth of 23 feet and is still in the metal. The showing is indeed a most flattering one. The Ingersoll Mining Co. is capitalized to the amount of $200,000, divided into 100,000 shares. No stock, however, will be placed on the market until Sept. 1, 1894.

Hereafter all male applicants for relief at Iron Mountain will be obliged to work a stated time on the city roads before assistance will be given.

It is expected that the Shafer will re-open in the very near future.

The Mastodon resumed mining operations last week with a force of forty men.

At the annual meeting of the Commonwealth Iron Co. recently held in Cleveland, it was decided to continue the present operations at the Badger until spring, therefore there will be no immediate increase or decrease in the number of men employed or a reduction in wages. The company is hopeful of a betterment in the condition of the iron market in the course of two or three months. If this should happily prove to be the case, it is probable that more men will be put on, otherwise the mine may shut down.

McKinnon Bros., who own the fee in the Sheridan mine at Iron River, have agreed to reduce the royalty from thirty to twenty cents per ton on iron ore. This is a commendable act, and other fee holders in the mining districts of the upper peninsula should do likewise. It is also stated on authority that the Chicago & Northwestern Railway Co. has reduced its freight rates from 65 to 52 cents per ton on hauls from the Menominee and Marquette ranges, with a corresponding reduction from the mines on the Gogebic range. The Northwestern Co. is confronted by a condition, and is bound to make any reduction in rates made by other competing lines. When there is a demand for iron ore the mines of Marquette, Menominee and Gogebic ranges will be prepared to compete with any producers in the world; and the Northwestern Co. will be on hand to haul the ore to the Escanaba docks for shipment to all Lake Michigan and Lake Erie ports.—*Mirror.*

The new shaft at the Ames is down ninety-two feet, and bottomed in diorite. They have started a drift for the ore deposit and expect to reach the latter in about two weeks. They believe it better to open up the mine as they go along, so that the most good can be gained.

The work of introducing electric signals at B. shaft at the Volunteer has been completed and works to perfection. The work at the mine is being confined to the shaft above referred to. The showing of ore has greatly improved during the last six months, and the quality has changed for the better, the product being now on the Bessemer line. The management feels greatly encouraged by reason of this gain.

There is nothing new to report from the mines of the Cleveland-Cliffs Co. The properties now idle will undoubtedly remain so until the coming of spring at least. We hear many rumors upon the streets about immediate resumption of work at the Lake shaft of this company, but nothing to substantiate them can be learned at headquarters. With the ore interest not menaced with Wilson bills and other unfavorable legislation, the Lake shaft would be employing more than a thousand men.—*Iron Ore.*

A slight increase in the working force at the Dexter was made Thursday. About a dozen men were taken on. With this increase the mine will be working some thirty-five men.

It is stated that work will be resumed at the Aurora on or before February 1st.

The mines of Ironwood are now giving employment to 700 men.

S. S. Curry returned Saturday from Milwaukee with the pleasing itelligence that a night shift of 50 men would be put on at once at the Pabst, and 150 more added to the Norrie and East Norrie forces. The extra crews started work Monday, and the group is now giving employment to nearly 600 men. Mr. Curry, when seen by a *News-Record* reporter, said: "The average cost per ton of getting our ore with the force we were working was too high, and our only alternative was to put a larger force at work or close down altogether." The increase of 200 men to the working forces at the mines will help to solve the poverty problem in this city.—*Ironwood News-Record.*

There are at work in the various mines of the Marquette Range at the present time 1,600 men, more than at any other range in the Lake Superior region. This is due to the reduction of railway rates by the roads reaching both Marquette and Escanaba and the concession made operators by freeholders on royalties. These royalties are a direct tax on the ore, under which the man who is fortunate enough to hold a title to the land gets a first lien on the product. These owners have seen that under present conditions they must reduce their royalty or let their property remain absolutely idle.

On the Vermillion Range 1,200 men are at work at the two great mines of the Minnesota Iron Co. On the Gogebic Range 1,000 men are in the mines, chiefly those of the Metropolitan Land & Iron Co. On the Mesaba, whose cheap steam shovel mining is, according to the advocates of the Wilson tariff schedules, to do away with the competition of the other ranges, only 200 men are at work mining, and none of them on the popularly famous steam shovel mines. In all about 4,500 men are employed on all the ranges, a far better total than many had believed or expected, and largely ahead of the total ninety days ago.

A move is now being made to induce Mesaba fee owners to reduce royalties to a reasonable basis, and the railways running to the range are expected to cut their rates of freight to Duluth to 65 cents, or a reduction of 15 cents. According to the *Engineering and Mining Journal* of New York, the average royalty paid on all Mesaba ore shipped last year, was 33 cents per ton; this estimate, however, includes ore shipped from fee as well as leased mines. The actual average royalty on leased mines is about 45 cents, which must be cut to 30 cents before the range can be successful.

The failure of the Gogebic mines—Colby, Tilden, Comet, Palms and Superior—which went into the hands of receivers last week, and the suspension of all operations at the Ashland, will cut down the business of that range very materially. The Ashland has always been a very large producer, and had recently made rich finds of ore. The other mines, all in the Penokee and Gogebic consolidated, were expected to produce not less than 300,000 tons this year. The companies have been unable to sell ore.

On the Vermillion range the Minnesota Iron Co. has increased its force and now runs 700 men at Tower and 500 at Ely. Ore is being hoisted very rapidly. On the Menominee fee holders have reduced their royalties and the railways have made a cut from 65 to 52 cents. The Chapin mine, the greatest of all the non-Bessemers, with a 15-cent royalty and a 52-cent rail freight, can land its ore at Cleveland at a trifle over $2 and others will do nearly as well.

Only one mine on the Mesaba is now hoisting ore, and that is not a steam shovel mine. The Biwabik, which has been worked by shovel, shut down last week, but will start up before Feb. 1. Its shutdown has been to complete an important deal as to ownership, which will largely increase the demand for Mesaba ores in the Pennsylvania valleys. When this is closed both the Biwabik and Ohio will be mined extensively. A very considerable amount of exploratory work is going on in the Mesaba, fully 500 men being employed at various properties.

STATUS OF THE ICE.

The prevailing cold wave seems to have reached the lakes just in time to prevent a complete breakup of the ice in Green Bay and the Straits of Mackinac. Last Saturday Menominee reported the ice as fast disappearing. A stage broke through several times while crossing from Sturgeon Bay. Along the east shore of the bay open water existed in many places, and fears were entertained that numerous fishing shanties had been lost. All fishermen who had shanties on the ice abandoned them, and as there were many thousands of dollars' worth of fish nets beneath the ice, fishermen were threatened with total loss. The ice throughout the greater part of the bay has been reduced to one inch or less in thickness.

Rain fell in the region of the Straits of Mackinac last Saturday, causing the ice and snow to disappear very fast. Trips between Mackinaw City, Bois Blanc and Round Islands were made with row boats on Friday. There is no ice in the Straits at Cheboygan, and none in sight as far as Packard's Point. At Mackinaw the ice is reported as far below the winter standard for thickness.

A report from Thunder Bay Island says that no ice can be seen on the bay or the lake. A year ago there was ice as far as the eye could reach.

During the closing days of last week large quantities of ice floated down Detroit river from Lake St. Clair. With the exception of this and a little thin ice close to the north shore, there is practically no ice on Lake Erie.

On some parts of the east shore of Lake Michigan peach growers have been alarmed lest the mild weather should bring out the buds prematurely and ruin the crop.

With winter half gone, on Lake Superior the ice between L'Anse and Baraga, at the head of Keweenaw Bay, is so thin that crossing is extremely perilous and very few take the risk. There is no ice to be seen from Ontonagon.

TWENTY FOOT HARBORS.

Congress Haugen introduced the following resolution in Congress January 9th, directing the Secretary of War to appoint a commission of engineers to examine and report upon the cost of deepening the harbors of Superior and Duluth, and their entrances to a uniform depth of twenty feet.

Whereas, Congress has sanctioned by legis ation the project of a twenty-foot waterway between Buffalo and Duluth and Superior; and

Whereas, The channels in Superior and St. Louis bays at the west end of Lake Superior are the last connecting links in this chain of improved navigation; and

Whereas, More than two-thirds of the commerce passing the Sault St. Marie canal goes to or from Duluth and Superior, and

Whereas, The deepening of the channel between the Great Lakes, costing very many times that of the betterments needed at Superior and Duluth, will be of small account unless vessels drawing twenty feet can readily and safely enter Superior and Duluth entrances and get up to their deck: Therefore be it

Resolved by the Senate and House of Representative of the United States of America in Congress assembled, That the Secretary of War be, and he is hereby, directed to appoint a commission, to consist of three engineers, to examine the harbors of Superior and Duluth and the entrances thereto, with a view of ascertaining the cost of deepening said harbors and entrances to a uniform depth of twenty feet, and to report their conclusions to the Secretary of War without delay, to be by him transmitted to Congress.

MARNE MEN IN CONVENTION.

The annual convention of the Marine Engineers' Beneficial Association is now in progress at Washington with an attendance of sixty-five delegates. The strict enforcement of the law in the matter of granting licenses to engineers will be strongly advocated. The association numbers 101 subordinate branches, located throughout the country from Bath, Me., to California, from Pensacola, Fla., to Duluth, Minn., and has 11,800 members.

The American Association of Masters and Pilots of Steam Vessels is in annual convention at Washington. Various changes in legislation are being discussed, and a report of the recommendations will probably be made to Congress. Delegates are present from all parts of the United States. The only representatives named from the lakes are R. S. Brown, of Grand Rapids, and Ralph C. Brittain, of Saugatuck, Mich.

THE ALBANY-PHILADELPHIA COLLISION.

Local Government Inspectors Frank H. Danger and Frank Van Liew, of Port Huron, have made public the result of their investigation into the circumstances surrounding the collision and sinking of the steamers Albany and Philadelphia off Point aux Barques, Lake Huron, late last November, shortly after they had entered a narrow bank of fog which extended out into the lake from the land. They find that the Albany had a full complement of officers on watch and a lookout properly stationed, that reasonable caution and skill was observed, and that the collision was not brought about through any negligence or lack of vigilance on their part. They find also that the Albany did not violate any of the rules of navigation. As for the Philadelphia, in the entire absence of any testimony on the part of the Philadelphia's crew on watch at the time of the collision, they having all been lost, and her master testifying that at the time he was called on deck his steamer was backing and so close to the Albany that the collision was inevitable, the inspectors are unable to determine how much she may have been to blame, or if through her negligence she in any way contributed to the collision. The investigation, the inspectors state, threw no light whatever upon the loss of the Philadelphia's lifeboat and the twenty-four men which it carried.

A NEW PACKAGE FREIGHT LINE.

General Manager Frank Owen announces that the Central Vermont line will charter, in connection with the New York, Ontario & Western Railroad, three steamers to run between Ogdensburg and Duluth during the coming season of navigation. The railroad will furnish them with coal cargoes from Oswego to Duluth, thus providing against any necessary dependence on the merchandise traffic westward, which may prove to be very small.

A marine engine said to be 104 years old was taken out of the S. S. Sadie, at Oakville, Ont., lately. Much of the engine has been in use the above length of time.

In these days of quick passages and attempts at record breaking across the Atlantic, it may be interesting to those who keep track of the days' runnings of the different steamers, going out and coming home, to note that the length of a day coming westward is about 24¾ hours, and going eastward is about 23¼ hours.

HOW SHIPS ARE MODELED.

Who would ever have imagined that a great ship—a modern wonder of the sea like the Paris or the Camperdown—is built as a woman makes a dress or a tailor cuts out a suit of clothes? That is the fact. Ships nowadays are built from patterns, and those patterns do not greatly differ in appearance or in fact from those which enable American women to copy the fashion in dress. To be sure, a tailor's and dressmaker's patterns are made of paper and are laid upon cloth or dress goods, while a shipbuilder's patterns are of wood, and steel and iron are made to follow them. That is perhaps the greatest difference between the methods of high grade tailoring and high grade shipbuilding, so far as their first steps go.

The English have only lately begun to value the model as the basis of shipbuilding. A famous American shipbuilder says that the model of the yacht America was the first model he ever saw in England. That accounts for the absence of beauty in English ships, which even to this day possesses varying degrees of ugliness, but no beauty. For, though they make models today, the mere making of them does not suffice. The art and appreciation of model making must be instinctive.

The French and Spanish from the earliest times made beautiful ships and models, and when one of these ships fell into the hands of the English they adopted and used her if possible, or if she was too much damaged they took her apart, piece by piece, and built a new ship like her by copying the exact shape of each part of her in new material. Curiously enough, we Americans have always made beautiful ships—well proportioned, artistic in every line, while satisfactory in an equal degree for all practical purposes.

A model is made in a way that seems queer to the average layman, who doubtless suspected that it was whittled into shape out of a block of wood, as we boys used to whittle our blocks at the age when all of us were shipbuilders. It is not done so. After an order has been received for a certain kind of ship the plans of it are drawn upon paper. Mr. Lewis Nixon, the famous constructor for the Cramps tells me that very early in the process he makes a picture of the ship as he wants it to look, but though he does so others may not consider it essential.

At all events, apart from any drawing, the needed dimensions and lines are developed upon paper, and then the model is made, and the president of the company begins to take very active interest in the work. The model is made in the shape of a block, formed of a number of pieces of wood glued together. These pieces represent the different curves of one side of the ship, from the keel to the gunwale—the different water lines is how the builders express it. To understand this the reader must imagine a ship made of solid wood. Imagine that cut in half lengthwise, and then imagine one half laid on its side and cut into slices.

The pen and ink calculations and plans produce the shape of the ship, and from these it is possible to obtain the outline and dimensions of every slice or plane between the bottom and the top. Each plane is measured and drawn in outline on a board, and the outline is dented or cut in the board with a sharp tool. All the boards or pieces of wood are then glued together, and a simple looking block is made—a block that shows nothing of its true nature except that the top of it bears the graven outline of the top deck or gunwale line of a ship. Out of that simple square block will come the egg which is to hatch the splendid ship that is to be.

That block, made up of slices, each with its dented outline of a different plane of the ship, is now cut away, much as we boys used to cut our block, but with this difference: Each board is cut exactly to the dented or graven line upon its surface. The shape the block will have when all the superfluous wood is cut away will be the model of the ship that was designed by the engineer on paper to fill the requirements of the customer's order, but will that model stand? Will the master builder be satisfied with its lines?

Will it do to be enlarged in steel and sent around the world as an example of what the Cramps consider the most beautiful and artistic and useful shape such a ship should have? No. Such a first model next to never suits the modeler, who in this case is Mr. Charles H. Cramp. He hacks into it with fervor. He tapers the bow. He digs away the stern. He shaves the whole model with the nice and dainty touches of a sculptor at work upon a statue on which is to rest his boast that he is a true artist.

The fate of the wooden block alters the figures of the engineer's plans. Perhaps the alteration is such that new drawings and a new model follow. Thus, by borrowing and lending, the two soon agree, and upon the two—the model and the plans—the ship will be built. Sometimes a model is on the scale of a quarter of an inch to each foot of the ship, but the scale differs with different builders.—*Harper's Weekly.*

THE SIREN AS A FOG SIGNAL.

The siren enjoys a high repute among fog signals. Its note, though neither melodious nor pleasant, is powerful. It can be heard at an enormous distance. The instrument is simple enough in make. It consists of two superposed discs, with a certain and corresponding number of holes. One disc is stationary and the other revolves, while at the same time air or steam is forced through the holes. When these are opposite each other the steam will pass; when not opposite, the passage of the steam is stopped. Hence, when one of the discs revolves the steam passes in a series of puffs, and if these puffs succeed each other with sufficient frequency a note is produced, rising in pitch with the rapidity of revolution, and increasing in power with the pressure of the steam. The discs may be revolved with a small steam engine, which also opens and closes a valve to allow for the passage of the steam, and this gives the sound which is the siren's characteristic, for a siren fog signal does not sound continuously but gives a certain number of blasts of a definite length each minute. The steam pressure is ordinarily about 50 pounds, and the sound can be heard from ten to fifteen miles, and occasionally much farther, depending on the weather.

Another form of siren is the Holmes Ingrey Siren, the self acting instrument, which is widely used on steamers. The discs are revolved by the steam itself, and the blasts are given by merely opening the valve by hand. The speed of revolution of the discs is automatically regulated by a centrifugal brake. It is the invention of Prof. F. H. Holmes, and with his subsequent modifications and improvements, it is now extensively used as a coast and light-house fog signal in Great Britain and numerous other countries. The remarkable penetrating powers and advantages it possessed attracted the notice of the English Admiralty, who requested Prof. Holmes to devise and construct an instrument specially suited to steam vessels; and the apparatus he produced is now successfully in use on the men-of-war and gunboats of the English, German, French, Italian, Dutch and other navies. The great advantages it possesses are, that (unlike the steam whistle or the horn) the note produced is sharp, clear and distinctive, uniform and correct in pitch, and of great penetrating power, the sound commencing and terminating with extreme suddenness.

CANADA IS WATCHING.

That the opportunity of reaping a harvest in the United States is being closely watched by the Canadians is seen in various projects already on foot in the Dominion. One is explained in a notice which appeared in a New York daily paper mentioning as a business opportunity that a company of first-class standing, owning a large, well-developed Bessemer ore mine in Canada, viewing the proposed total repeal of duty on ore and the reduction in duty on pig iron in the United States desires to secure additional capital in order to increase its shipments of ore to American consumers, and to more extensively manufacture special low phosphorus pig iron for American consumption under the Canadian bounty of $2 per ton. The Dominion is now paying a bounty upon each and every ton of pig iron manufacturered within its borders, but American statesmen are now endeavoring to reduce our tariff on pig iron far below that figure. As we have already stated, with cheap water freights and a bounty of $2 per ton, Canadian pig iron manufacturers can easily meet the tariff as fixed in the Wilson bill.—*American Manufacturer.*

MARITIME PATENTS.

No. 512,751—Propeller Wheel. Issued to Mikle Schmaltz, Bay City, Mich., assignor of one-half to Wm. J. Wanless, same place. Filed July 20, 1893.

Claim.—1, in a propeller wheel, the combination with a rim of blades bearing at their outer extremities against the inner surface of the rim, and provided with terminal projections extending through apertures in the rim, a hub provided with channels in which the inner ends of said blades are fitted, and means for adjusting the blades to the hub; 2, the combination with a rim of a hub provided with dovetailed channels, blades provided at their inner extremities with dovetailed webs fitting in said channels, and tapered keys fitted in the channels between the floors thereof and the contiguous ends of the blades; 3, the combination of a hub provided with spirally-disposed ribs or enlargements, which are partly cut away to form channels having straight floors, blades fitting at their inner ends in said channels, a rim provided with spaced apertures or perforations, projections intergral with the outer ends of the blades fitting in said apertures or perforations and headed upon the outer surface thereof, and tapered wedges or keys fitting in the channels between the inner ends of the blades and the floors of the channels.

No. 512,957—Marine Life Buoy. Issued to James A. Guest, Washington, D. C., and James H. Bates, Hoboken, N. J. Filed Feb. 28, 1893.

Claim.—In a life buoy, in combination, an electric lamp, a circuit in which the lamp is included, a source of electricity, and an electric switch, both carried by the buoy, said switch contracts being normally insulated by a material whose insulating power is destroyed by water.

No. 512,825.—Dredging or Excavating Apparatus. Issued to Charles W. Hunt, West New Brighton, N. Y. Filed May 22, 1893.

Claim.—1, the combination with the scoops or teeth, and the frame and pivotal connections, of three barrels of different sizes, and a shaft or axis for the same revolving together, a hoisting chain connected to the largest barrel and by which the barrels are revolved, and a chain extending between the other two barrels and acting to close the apparatus, as the barrels are revolved; 2, the combination with the head-block and the pivoted connections of a main shaft, a chain barrel upon such shaft, a hoisting chain passing around said barrel, differential chain barrels upon the main shaft, chains therewith connected, and pulleys upon the head block; 3, pulleys upon which a differential chain acts in closing the scoops or teeth by the rotation of the barrels as acted upon by the hoisting chain.

No. 512,827.—Excavating Bucket. Issued to Charles W. Hunt, West New Brighton, N. Y. Filed May 29, 1893.

Claim.—In an excavating or dredging apparatus, the two-part bucket or grapple having arms upon one part or section extending upwardly and over the other part or section, and pivotal connections between such arms and the other section, the pivots at the upper ends of the arms being at one side of a plane passing vertically between the two sections of the bucket or grapple, in combination with a drum and shaft supporting the drum, such shaft extending between the arms at the respective ends of the bucket and forming or being in line with the pivots at the ends of the arms, and a hoisting chain attached to the drum, the parts being constructed so that such hoisting chain is in a vertical plane passing centrally between the two halves of the bucket or grapple, or nearly so.

No. 512,828.—Excavating Bucket. Issued to Charles W. Hunt, West New Brighton, N. Y. Filed Sept. 21, 1893.

Claim.—In an excavating apparatus, the two parts or shells having the edge of the bucket, below the edge of the bucket, so that in closing, the one edge passes above the other and the one bucket laps upon the other and the edges pass beyond the cutting point.

No. 512,898.—Boom for Dredge. Issued to William B. Pless, Stockton, Cal., assignor to the Pless Dredging & Reclamation Co., of Nevada. Filed June 6, 1893.

Claim.—1, in combination with the boom of a dredger, and with its supporting hog chain or tension rod, a loose sleeve fitting the cylindrical end of the boom, a frame forming part of said sleeve, sheaves for the dredger chains journaled in said frame, and a hood or guard for retaining said chains on the sheaves, substantially as set forth; 2, in combination with the boom of a dredger, a frame or box on the end of the boom, sheaves supported in said frame, a guard or hood, and ribs or flanges projecting from said guard into the space between the sheaves.

NOTES.

THE machine shops of the Pusey & Jones Co., Wilmington, Del., which have been shut down for nearly two months, will start up soon. Orders for machinery have been received that will keep them busy for several months to come.

The tug El Toro, built by the Newport News S. & D. D. Co., and fitted with the See quadruple expansion engine, was in commission 349 days during the year ended Sept. 30. She burned but one and one quarter tons of coal per day, full pressure of steam being kept on the boiler for the entire twenty-four hours.

THE dimensions of the new buildings of the Detroit Foundry Equipment Co., at Harvey, Ill., will be as follows: The equipment building will be 99x200 feet, with 4 departments and a railroad track through the center. The boiler house will be 30x60 feet and general foundry building 95x195 feet. All of these buildings will be of brick and iron and be practically fire proof.

A CIRCULAR pamphlet full of arguments favoring the use of stockless anchors has just been issued by De-Grauw, Aymar & Co., of New York, agents for Tyzack's triple-grip patent. The advantages lie in the facility with which they are "let go," and the fact that a ship is able to "get" the anchor in all weathers without risk, no time being lost in securing it when "hove up," so that it will remain perfectly immovable, even in the worst weather.

THE American Ship Windlass Co., of Providence, R. I., have just received an order for a wharf drop from the Starin Transportation lines, to go on their new wharf at the foot of Cortlandt street, North River. These lines have used two of these wharf drops at Glen Island for four years, and are so much pleased with them that they have now decided to adopt them for their new wharf. The result has been the same everywhere that these drops have been used, and they have now been placed on wharves all over the country, from Maine to Louisiana.

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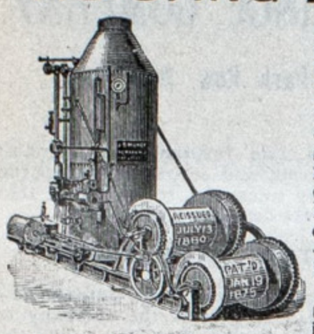

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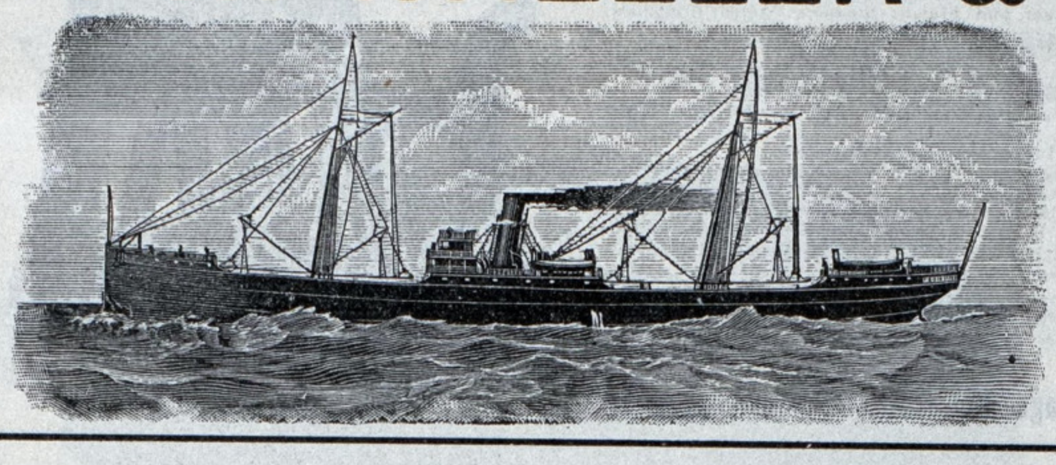

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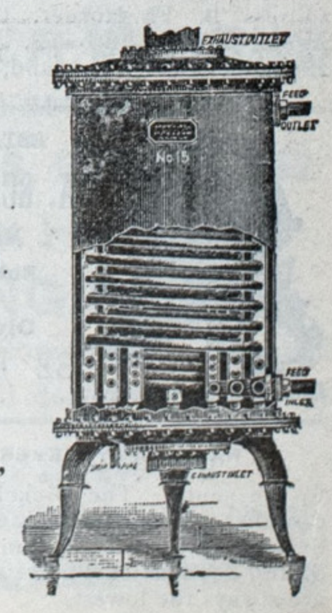

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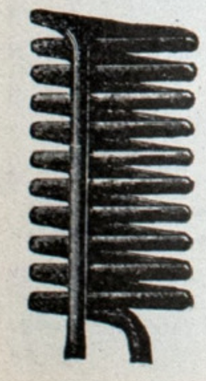

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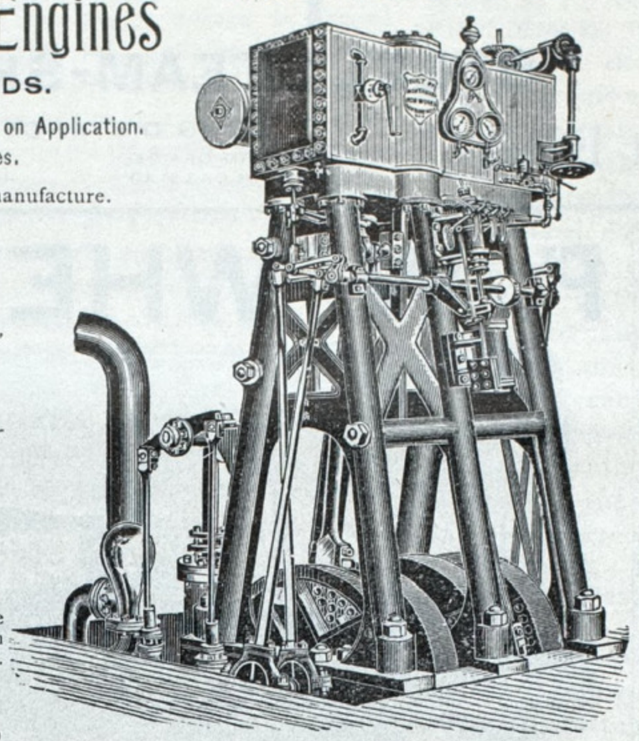

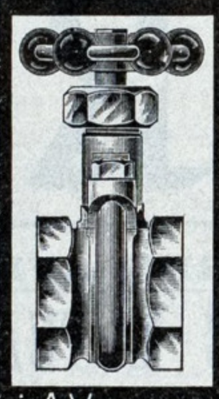

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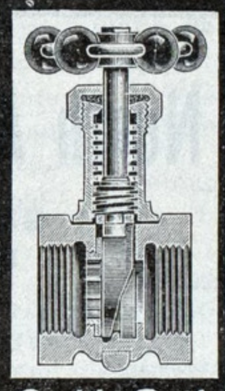

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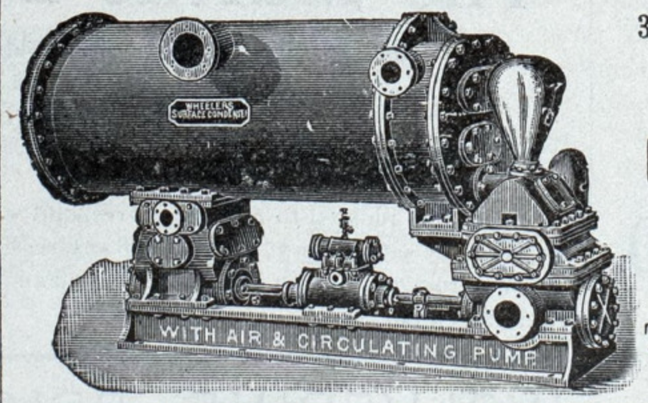

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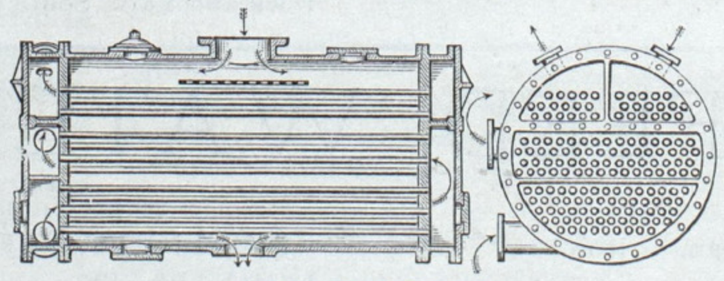

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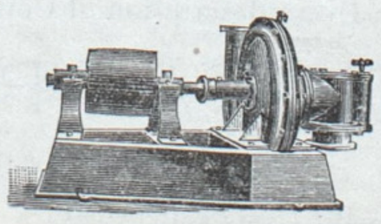

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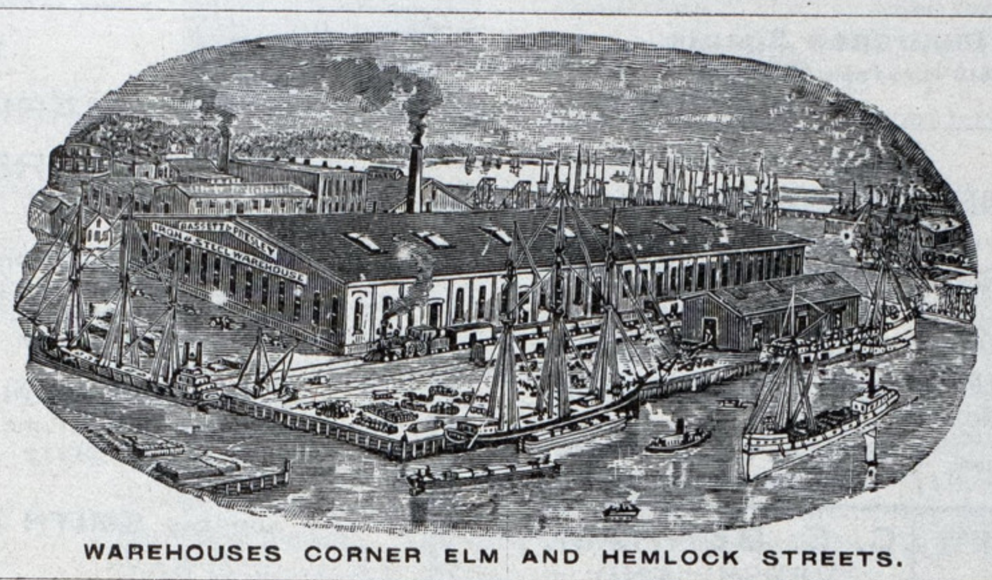

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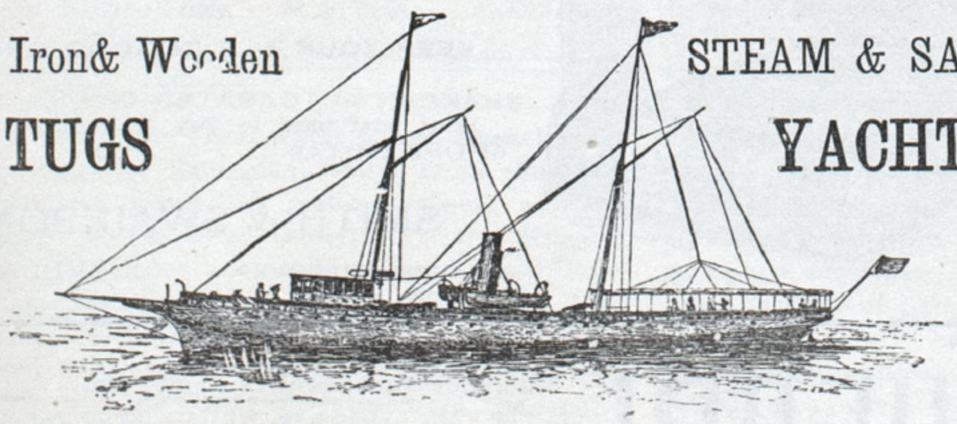

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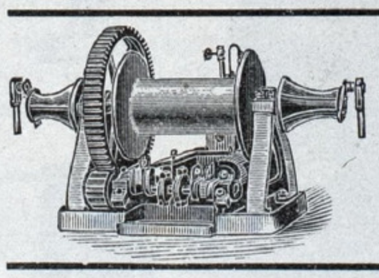

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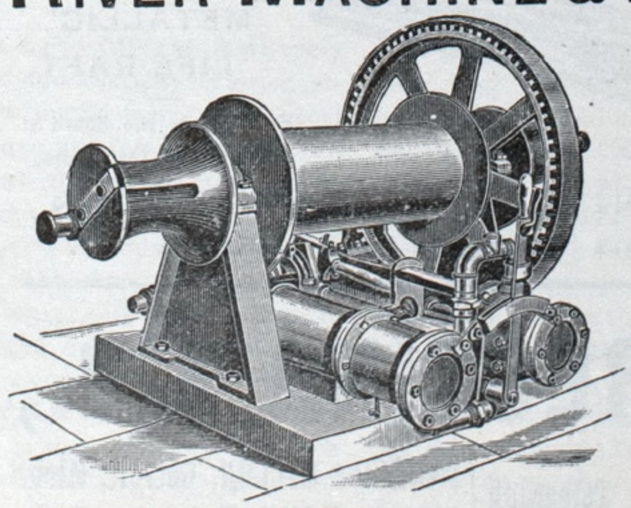

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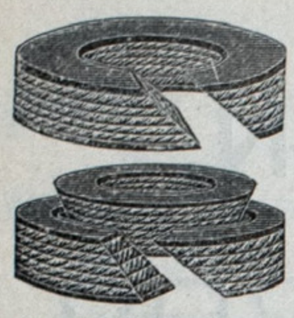

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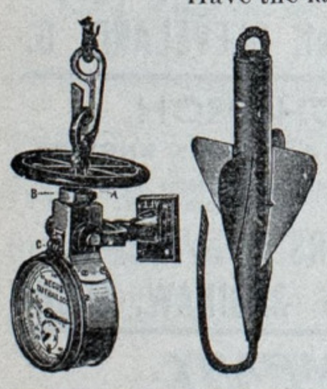

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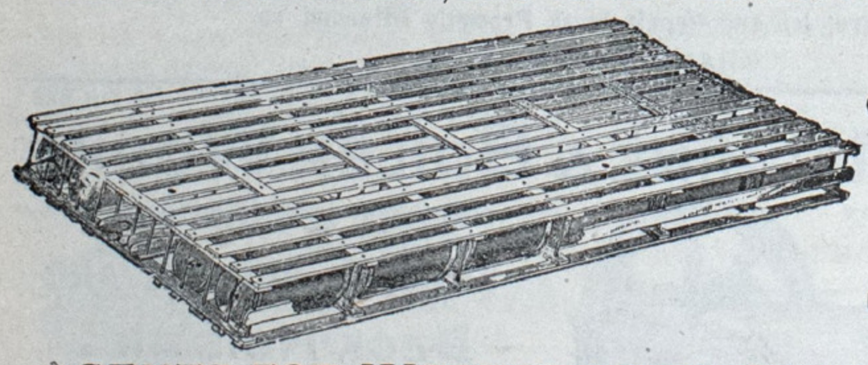

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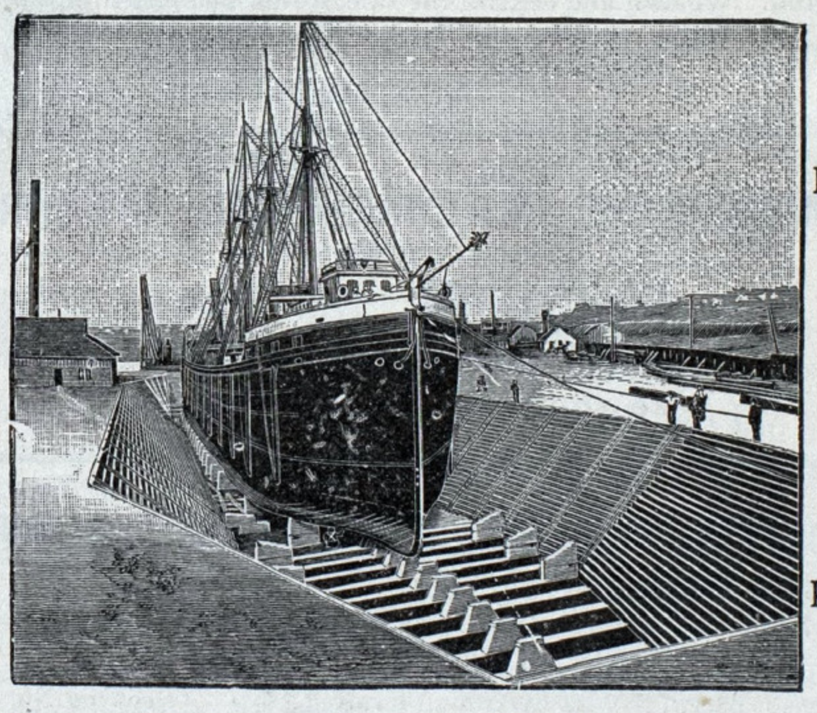

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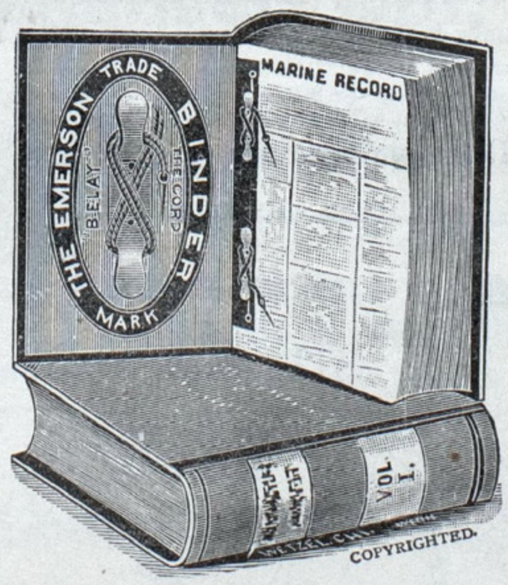

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